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An Investigation into the presence of market timing in configuration of capital structures by companies listed at the NSE

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AN INVESTIGATION INTO THE PRESENCE OF MARKET TIMING IN CONFIGURATION OF CAPITAL STRUCTURES BY COMPANIES LISTED AT THE NSE.

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Declaration

I declare that this work has not been submitted and approved for the award of a degree by this or any other university. To the best of my knowledge and belief, this thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

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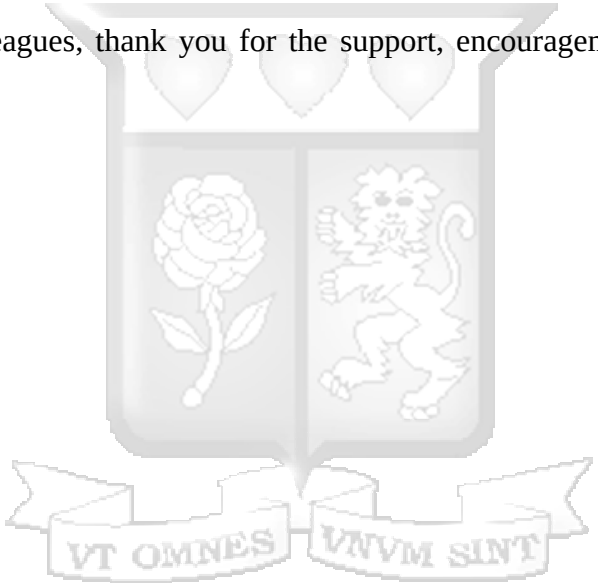

Dedication

I dedicate this work to my husband, Januarius Musinga and to our three children, Fernandes, Rita and Joachim.

Abstract

The study sought to examine whether over or undervaluation of securities drove capital structure decisions with a focus on companies that offered corporate debt and rights issues for the period between 2006-2016. Main study objective aimed at establishing presence of market timing in security issuance by companies listed at the Nairobi Securities Exchange (NSE). The study was anchored on four theories; Market timing, trade-off, pecking order and the irrelevance theories. Market timing theory assumes that no optimal capital structure exists for firms and that over or undervaluation of securities and conditions existing in the financial markets are the driving forces in securities issuance decisions. Trade off theory explains how corporations are usually financed partly with debt and partly with equity and that firms determine the type and amount of financing to use by trading-off the costs and benefits of both debt and equity. The pecking order theory assumes presence of information asymmetry between managers and investors in a firm. Equity and debt market timing are enabled by presence of private information asymmetry and public information asymmetries respectively. The pecking order further addresses other aspects of capital structure including ranking of types of financing used by firms and determinants of capital structure; tangibility of assets and firm growth. The "irrelevance theory" contradicts market timing theory by assuming market efficiency and that firms cannot increase firm value by switching between debt and equity. It addresses capital structure determinants such as profitability, non-debt tax shield and liquidity. Study methodologies utilised by the study were; an event study methodology, unbalanced panel data regression analysis and descriptive statistics for both primary and secondary data. Findings from the study indicate that corporate debt and rights issuing firms underperformed similar size non-issuing companies in the 30-day event window.MBR which is a measure and proxy for market timing was found to statistically and significantly influence market and book leverage which are measures and proxies of capital structure. Finance managers were found to have similar views with regard to both equity and market timing. The study found out that managers of listed/ intending to be listed firms, look at the actions and success of securities issuance decisions taken by other listed/ intending to be listed companies in making their financing decisions in such a way that if for example corporate debt issue has been successful, managers would issue corporate debt resulting in a sort of clustering of the security issues. If security issuance choices taken by the listed companies were unsuccessful the finance managers would re-strategize to other ways of financing such as borrowing loans from commercial banks or use other alternatives such as retained earnings until market conditions becomes favourable. The study concludes that there is presence of market timing in security issuance by the listed firms at the NSE. Further, the study concludes that a relationship exists between market timing and capital structures of quoted companies at the NSE. Presence of market timing in securities issuance enables listed companies to minimise overall cost of capital, resulting in shareholder wealth maximization through increased profitability of the firm, which is the ultimate goal for any finance manager.

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List of Abbreviations / Acronyms

AEX	Amsterdam Stock Exchange
AMEX	American Express Credit Company
ANOVA	Analysis of Variance
AR	Abnormal returns
CAPM	Capital Asset Pricing Model
CAR	Cumulative Average Returns
CBK	Central Bank of Kenya
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CMA	Capital Market Authority
CPI	Consumer Price Index
EBITDA	Earnings before interest tax depreciation and amortisation
EFWAMB	External Finance Weighted Historical Market To Book Ratio,
G7	Group Seven Countries, Canada, France, Germany, United States , United Kingdom, Japan, Italy
GLS	Generalized Least Squares
IPO	Initial Public Offer
JSE	Johannesburg Stock Exchange
KEBS	Kenya Bureau Of Statistics
KEBS	Kenya Bureau Of Statistics
KQ	Kenya Airways

LSDV	Least squares dummy variables approach
MB	Market-To-Book
MBR	Market-to-Book ratio
NASDAQ	National Association of Securities Dealers Automated Quotations
NASI	Nairobi all shares index
NSE	Nairobi Stock Exchange
NYSE	New York Stock Exchange
OLS	Ordinary Least Squares
PPE	Property Plant and Equipment
SEO	Seasonal Equity Offerings
UK	United Kingdom
US	United States
VAR	Vector Auto Regression
YT	Yearly Timing

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Market timing refers to a firm's management actions directed towards capitalizing on temporary fluctuations in pricing of security, especially through offering of highly valued securities and repurchasing of lowly valued securities. In capital markets, it refers to the practice of offering stocks when highly valued by the market, whereas in the money markets, it refers to the practice of offering debt when existing interest rates are at their minimum, all aimed at minimizing WACC for a company (Zhou, Guo, Chen, & Yang, 2012). According to Modigliani and Miller, (1958) different forms of capital costs for firms do not fluctuate in isolation, implying firms cannot benefit from expediently switching between equity and debt in the efficient and integrated markets that they studied. In the inefficient or segmented capital markets by contrast, current stockholders gain from market timing attempts at the cost of incoming and outgoing owners of the company. Thus, the management of a firm would be motivated to exploit opening windows for financing when such opportunities arise and if they have same interests as ongoing shareholders.

Managers market time due to information gap that exists between company executives and investors in the financial markets, a phenomenon that concurs with pecking order theory (Myers & Majluf, 1984). Managers market time in the equity market resulting from private information gap where company executives possess more information than the investors about their companies resulting in mispricing of securities. Additionally, low information gap between company executives and investors in the equities market enables managers to take advantage of opening windows for financing in this market. Market timing in debt market is achieved through public information asymmetry whereby managers use information in public domain to create their own timing opportunities. It can also be achieved in circumstances where there is high information asymmetry in the equity market, which makes investors turn to debt which is less

exposed to information asymmetry. These two situations create dynamics whose results are capital structures that may be regarded as optimal for firms (Baker & Wurgler, 2002).

Baker & Wurgler, (2002), assert that market timing is a major factor which determines whether a corporation will use debt or equity in its capital structure. Implying companies pay no attention to their use of debt or equity, that the type of funding which emerges to be highly valued by the markets when they seek capital is what they choose(Baker & Wurgler, 2002).Market timing is a major factor shaping corporate funding choices (Alti, 2006). Market timing theory also known as windows of opportunity theory, asserts that external equity is preferred by firms when its cost is at its minimum otherwise debt becomes the most preferred type of financing. According to this theory, managers in firms sometimes recognize their risky securities as mispriced by the market. In such cases, equity or debt are then issued to take advantage of this inefficiency in the market. This inefficiency renders financing policies to become ad rem; in that when share prices are high, shareholders of a company gain through offering highly priced equity and debt becomes desirable, when prices are low, (Baker & Wurgler, 2000).

Baker & Wurgler, (2002) presented the windows of opportunity theory with reference to firms in the US. Further evidence on this theory emanates from G7 countries, Mahajan & Tartaroglu, (2008), Dutch companies, De Bie & De Haan, (2007), French entities, Bougatef & Chichti, (2010), European countries, Gaud, Jani, Hoesli, & Bender, (2005),Taiwan firms, I.-H. Huang, (2014), supplementary support from US companies, Elliott, Koëter-Kant, & Warr,(2004); Alti, (2006) and developing countries Henderson et al., (2006); Bo, Huang, & Wang, (2011). Findings from these studies indicate that short run presence of market timing can be confirmed, but the long run persistence vary considerably. Whereas the short-run impact of market timing is well documented in literature Taggart, (1977); Ikenberry et al., (1995); Kayhan & Titman, (2007); De Bie & De Haan, (2007), Baker & Wurgler, (2002) are the first to demonstrate how persistent the effect market timing was on the debt-equity mix. Criticisms have however, been drawn to the market timing theory by Alti, (2006);Hovakimian, (2006); Butler, Grullon, & Weston,(2006) who had an issue with the persistent and overall economic significance of market timing. These

findings illustrate how empirical study's findings on market timing are; not only controversial but are also inconclusive and mixed.

Further controversy is drawn from the fact that different variables have been utilised to capture market timing attempts. Baker & Wurgler, (2002) used external finance weighted historical market to book ratio, EFWAMB to measure the firm's market timing attempts. Kayhan & Titman, (2007) and De Bie & De Haan, (2007) split Baker & Wurgler, (2002) EFWAMB into two parts: yearly timing and long-term timing. They use yearly timing (YT) to capture market timing. A hot issue market characterized by a clustering of issuers or cold issue market are used to capture market timing in equity issuance decisions by Alti, (2006) and in debt issuance decisions by Doukas, Guo, & Zhou, (2011).

Different methods have been employed to capture market timing. Baker & Wurgler, (2002) used the ordinary least squares regression model; Elliott, Koëter-Kant, & Warr, (2008) used an earnings-based valuation model while other studies have appropriated the generalized least squares regression model Bruinshoofd & de Haan, (2012).

To make the results of market timing even more convoluted, findings from some literature on market timing point to forward-looking market timing implying financing choices taken by relying on the predictions of upcoming market conditions while other literature report backward-looking market timing suggesting responses to past and prevailing market environment Baker, Greenwood, & Wurgler, (2003; Zhou et al., (2012); Barry, Mann, Mihov, & Rodriguez, (2005); Bancel & Mittoo, (2004); Graham & Harvey, (2001).

Capital structure is regarded as an important area of deliberation for companies since financing costs are elemental to a firm's potential to be competitive Ater, (2017b). Siagian & Saad, (2011) define capital structure as the manner in which a company funds its assets, mainly by way of a mixture of equity, debt and hybrid securities. Capital structure subject remains interesting and puzzling, in that debt and equity are critically important to the firms' performance and consequently, company executives are tasked with assembling an ideal combination of securities

that maximizes firm value. Baker & Wurgler, (2002) refer to capital of a firm as the collective product of past efforts to ‘time the market'. They argue that when market conditions are not in favour of the firms, managers may choose alternative financing methods such as internal financing sources. As a result, the company's cost of capital decreases, and the existing stockholders reap a benefit from increased profitability of the firm which maximizes the firm value.

Capital structure has two components debt and equity. In this study corporate debt was taken to represent the debt component of capital structure and rights issues to represent equity component of capital structure. The study sought to examine if listed firms utilised market timing in issuance of securities as a result of which their capital structures would be a collective outcome of the market timing attempts. Listed companies issue equity when they are highly priced by the market and otherwise, they issue debt. In situations where long term interest rates are perceived as low managers of the listed firms issue corporate debt before the interest rates go up. If conditions existing in financial market have been favourable the managers will respond by issuing debt or equity depending on which market the favourable conditions are present. This dynamics create opportune time for executives in the quoted companies to issue the security whose market conditions are favourable. As a result, a distortion occurs in capital structure of securities issuing firms in such a manner that their capital structures can no longer be described as target or optimal capital structures.

The optimal debt-equity mix for a firm maximizes firm value and reduces the firm’s overall cost of capital. According to the market timing theory, an ideal debt-equity mix does not exist; managers only select the type of funding which seems highly valued by financial markets. Hence, observed capital structures are a collective product of past efforts to time the markets (Baker & Wurgler, 2002).However, some literature argue that an optimal capital structure exists. Moyo, (2016) studied capital structure choices of financial services firms in South Africa. Results from this study dismissed both market timing and pecking order hypotheses. Conclusions drawn from this study indicated that stock market performance and share returns do not influence security issuance choices of these companies. Study findings strongly validated the dynamic

trade-off theory indicating that Johannesburg Securities Exchange listed financial services companies have target optimal capital structures which they actively adjust towards. A firm may market time by issuing equity or through the issuance of debt.

Timing of markets is mainly utilized by firms in the growth phase of a company life cycle DeAngelo, DeAngelo, & Stulz, (2010). These firms prefer to raise capital through initial public offerings (IPO) in spite of the associated costs as the overall cost will be lower than the debt interest due to market undervaluation of growth firms. It also guides managers to carry out Seasonal Equity Offerings (SEO) during the lifecycle of the firm. Debt is issued when the prevailing interest rates in the market are low just before they increase.

In corporate finance policy market timing is of paramount importance. Four different kinds of studies have so far found evidence which can be classified as support for market timing. First, when actual funding choices of companies are analyzed, evidence is found to show that companies have a high probability to offer equity when they are highly priced by the market and will issue debt or repurchase stocks in markets where share repurchase is authorized when their market valuations are low. For instance, rights offering correspond with high valuations in Hovakimian, Opler, & Titman, (2001), IPOs correspond with high valuations Pagano, Panetta, & Zingales, (1998), debt issues are accompanied by low valuations in Henderson, Jegadeesh, & Weisbach, (2006) and stock repurchases correspond with low valuations in Ikenberry, Lakonishok, & Vermaelen, (1995).

Second, when long-run stock returns are analyzed immediately after financing decisions market timing is found to be successful. companies will offer equity when they perceive the cost of equity to be comparatively low and issue debt and/or repurchase equity when the cost of equity is reasonably high Loughran & Ritter, (1995); Spiess & Affleck-Graves, (1995,1999). Third, analyzed earnings projections and realized earnings surrounding equity offerings indicate that corporations are predisposed to issue stock when investors are quite passionate about earnings projections of a firm, Loughran & Ritter, (1997); Denis & Sarin, (2001).

Fourth, and perhaps the most persuasive proof, in anonymous enquiries, managers acknowledge market timing. Graham & Harvey, (2001) established that 67% of CFOs surveyed agreed that stock under or overvaluation was an essential or extremely essential consideration they made when issuing equity, and almost a similar number concurred that if the share price had in the recent past risen, the price at which they sold their stock was high. In this study the existing share prices are considered more essential than 9 out 10 other aspects put into consideration when issuing shares and more essential than the other 4 determinants pondered in the choice to offer debt.

In Africa, Bougatef & Chichti, (2010) studied French and Tunisian quoted companies to investigate relevance of market timing considerations in financing decisions taken by these firms. Findings from the study conform to market timing in that studied firms only issued equity when they were highly valued by the capital markets and after market performance improvement. Consequently, these firms recorded reduced leverage levels in the short run and this impact lasted more than eight years. Concurring with these findings is a study by Reddy and Tran, (2017) who studied capital structures and market timing from a evolved and evolving countries perspective. Findings of the study revealed that countries with well-developed stock markets and institution structures recorded the persistent influence of equity market timing on firms' debt-equity mix. However, individual country results are much weaker and insignificant for many countries suggesting that stock market and institutional environment in many developing countries are not well developed and this impacted on the results of the study in circumstances where the market timing persistent effect was not confirmed.

In Kenya, Ater, (2017b) reviewed the existing literature on the relationship between capital structure and market timing theory from an emerging markets perspective. Reviewed empirical studies revealed market timing influences the debt-equity mix of firms and company's performance. Moreover, the market timing effect and magnitude on the debt-equity mix is unclearly stated as different studies revealed mixed results. One set of studies revealed that market timing creates a distortion company's capital structures in the market while the other set holds that the influence of market timing on capital structure is not persistent.

The current study aimed at investigating existence of market timing in security issuance choices taken by listed companies in the NSE with a focus on companies that issued corporate debt and rights issue between the years 2006 and 2016.

1.2 Problem Statement

Managers of listed companies act as agents for shareholders. As a result, their actions should be directed at shareholder interests in wealth maximization. This objective could be achieved by designing an ideal capital structure for a firm. A perception subsist that, there is indeed an optimal capital structure, that once put in place and achieved, a firm's cost of capital would be minimized while its market value would be maximized I.-H. Huang, (2014); Kayo & Kimura, (2011); Kraus & Litzenberger, (1973). However, an ideal level of capital structure cannot be observed since the debt-equity mix is considered a collective outcome of past efforts to time the market as indicated by Baker & Wurgler, (2002); Jensen, (1986); Jensen & Meckling, (1976); Modigliani & Miller, (1958),while Kumar & Sharma, (1998) justify nonexistence of a single optimal capital structure for all firms or for same firm at all times.

Ideally, a finance manager should plan an optimum capital structure for his company obtained when the market value per share is maximized (Pandey, 2010). In reality, however, the determination of an optimum capital structure is a formidable task that has to go beyond theory. Planning debt-equity mix of a firm is a highly psychological, complex and qualitative process Rao, (1994) since it involves balancing the stakeholders' expectations (Risk and return) and capital requirements of the company.

The debt-equity choice remains a focus for debate in corporate finance literature Bougatef & Chichti, (2010). Previously such a choice was assessed from a tax benefit, financial distress costs and agency costs perspective ignoring one important consideration, the timing of the security issuance decisions. Baker and Wurgler, (2002) assert that market timing is top on the list factor influencing a firms debt or equity use in their capital structure. This implies that it does not matter the type of funding firms use fund their investments; they just select the form of financing

which seems more valued by the markets. Equity is only issued when it is highly priced by the markets and debt is only issued when the prevailing interest rates are low just before they increase. Whether firms exploit the markets in their financing policy is still unresolved in literature in that prior studies on market timing give results that are mixed and inconclusive. This creates a research gap which this study sought to address.

Firm managers issue debt, equity or hybrid securities in an attempt to ensure that the firms are not only adequately stocked with the sources of funding needed but also the used financing option is optimized, hence, creating value for the firm. Such decisions are taken in imperfect markets where factors influencing the decisions are not only facing constant disruptions but are also continuously changing (Payne, Rumore, & Boudreaux, 1994). This means that managers need to not only identify the opportune time to utilize a given source of finance but also ensure that it is the most optimal for that firm.

Firms market time by taking advantage of temporary fluctuations in the pricing of their securities. This timing behaviour enables firm managers minimize the cost of capital, hence maximizing firm value. A well-established view is that firms in evolved markets including the US take advantage of capital and money markets fluctuations in making their financing decisions. What remains unclear is whether firms in developing financial markets such as Kenya follow a similar behaviour. The current study, therefore, sought to investigate the presence of market timing in configuration of capital structures of listed firms at the NSE.

1.3 Objectives of the study

1.3.1 General objective

To investigate presence of market timing in security issuance decisions by companies listed at the NSE.

1.3.2 Specific objectives

1. To investigate presence of market timing in securities issuance by listed companies at the NSE.
2. To analyze the association between market timing and capital structures of listed companies at the NSE.
3. To establish finance manager's views with regard to market timing by the listed companies at the NSE.

1.4 Research questions

1. Is there evidence to support market timing by listed firms at the NSE?
2. Is there an association between market timing and capital structures of companies listed at the NSE?
3. What are the finance manager's views with regard to market timing by the listed companies at the NSE?

1.5 Scope of the study

Focus of current study is 21 companies listed on the NSE that raised capital through rights issue and corporate debt between the periods 2006 to 2016. Appendix 3 shows the list of companies studied. This study period was chosen because it is during that time that most rights offerings and corporate debt issues took place at the NSE. 21 rights issues and 27 corporate debts were issued at the NSE in the period under review.

1.6 Justification for the study

This was aimed at providing the motivation behind the research being conducted as well as the benefits expected to accrue to the various stakeholders.

1.6.1 Companies

Firms exist to maximize wealth for the owners. In their attempt to increase the owners' wealth and reduce the cost of capital, firm managers need to identify windows of opportunities for financing where their securities are overvalued or under-priced due to irrational investors and capitalize on these.

1.6.2 Shareholders and investors

Where SEOs sell overvalued shares through timing, then wealth is handed over from stockholders purchasing the SEO to current stockholders who do not partake in such offerings. Stockholders who trade in stocks when SEO are floated neither gain nor lose from the equity market timing. Debt helps to position corporate executives expectations in line with those of stock and debt holders since interest and principal are periodic payments which if not met a company may face bankruptcy or financial distress. This study informed current shareholders of listed firms to know whether they gain, lose or remain indifferent due to market timing of security issuances by companies they have invested in. Varying investor expectations, structures and regulations exist in the Kenyan capital market. Findings from the study assisted investors understand firm's motives of issuing securities that constitute capital structures of companies they invest in and hence enable them to make rational investment decisions.

1.6.3 Regulators

CMA and CBK who are the stock market regulator and money market regulators in Kenya respectively, can use information from this study to formulate policies governing issuance of securities by listed companies and also in formulating investors and /shareholder protection policies. Share repurchase is not legalized in Kenya even though the Revised Companies Act of 2015 contains provisions which allow listed companies to repurchase shares through NSE. The government can use findings from the study to determine whether it is worthwhile to legalize share repurchase by firms listed at the NSE or not.

1.6.4 Academicians and Scholars

The study aims at shedding light as to whether managers time the market during formation of capital structures for Kenyan listed companies. It will build on the existing literature on capital structures of quoted firms at the NSE. It will add to the literature on optimal capital structure by explaining if firms listed at the NSE have an ideal capital structure or not. This study will also identify areas for further research with regard to market timing and capital structure.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

A detailed account of reviewed literature is advanced in this chapter, with the subsections structured as follows: 2.2 Theoretical Review; 2.3 Empirical Review; 2.4 Conceptual Framework; 2.5 Research Gap and; 2.6 Summary of the chapter on literature review.

2.2 Theoretical Review on market timing and capital structure

This part covers theories that the study is anchored on. Three major theories guide financing decisions of firms; market timing Baker & Wurgler, (2002), pecking order and trade-off theory. The irrelevance theory Modigliani & Miller, (1958) describe the capital structure of a firm.

2.2.1 Market Timing Theory

A theory developed by Baker & Wurgler,(2002) in their research on capital structure and market timing. It asserts that firms plan their security issuance decisions to tap into the prevailing market conditions. New shares are only issued when existing share prices are considered to be priced at a premium by the market otherwise debt is preferred (Baker & Wurgler, 2002). Variability of share prices and interest rates influence a company's debt-equity mix. Two viewpoints exist with regards to equity market timing that result to comparable capital structure dynamics.

The first view presupposes existence of rational economic agents. The assumption made is that companies offer equity following a reduction in information asymmetry that subsists between company executives and shareholders of a firm achieved mainly through a positive information release. The reduction in information asymmetry corresponds with a run up in stock prices creating an enabling environment for firms to exploit opening windows for financing.

The second view presumes that economic decision makers have irrational behaviour, Baker & Wurgler, (2002) that results in time-varying mispricing of a firm's share. Corporate executives in these firms will then issue equity owing their belief that equity is lowly priced by market and issue debt when they notice equity to be highly priced by market (Baker & Wurgler, 2002).Market inefficiency is not a prerequisite for this version of market timing nor does it expect managers to successfully forecast share returns. It presumes that timing the market is a skill manager's believe they can execute successfully.

The theory postulates that corporate executives time the market when issuing securities Baker & Wurgler, (2002); Korajczyk, Lucas, & McDonald, (1991); Lucas & McDonald, (1990). Consistent with pecking order, market timing theory is premised on presence of information gap between investors and managers. The theory asserts that a company's choice to offer equity relies on current valuation of its shares and stock market performance. Corporations issue equity when they deem company's shares are presently overpriced by market or else, debt is issued (Barclay & Smith, 2005). Issuance of debt signals that a company's stock is under-priced (Spiess & Affleck-Graves, 1999). Debt issuance mainly happens in cases where interest rates are low just before they increase.

Support for this theory is however mixed. Several studies Graham & Harvey, (2001); Bougatef & Chichti, (2010); Bancel & Mittoo, (2004); Elliott et al., (2004); Jenter, (2005), validate the market timing theory by confirming that securities overvaluation drives issuance decisions. Other sets of literature demonstrate that companies that finance their investments through rights issue, IPOs and convertible debt face poor post-issuance performance; Loughran, Ritter, & Rydqvist, (1994); Ritter, (1991); Spiess & Affleck-Graves, (1995); Loughran & Ritter, (1995); Spiess & Affleck-Graves, (1999). These findings are consistent with cases where firms leverage from opening windows for financing opportunities when their securities are overvalued and issue such securities.

Various authors, Alti, (2006); Brendea, (2012);Bruinshoofd & de Haan, (2012); Leary & Roberts, (2005): Flannery & Rangan, (2006); De Bie & De Haan, (2007); Altı & Sulaeman,

(2012); Vallandro, Zani, & Silva,(2014b); Mahajan & Tartaroglu, (2008); Nguyen & Boubaker, (2009) stress on non-persistence influence market timing has on capital structures, refuting market timing theory in support of pecking order and dynamic trade-off theories. Stock market and money market performance and misvaluation of debt or equity do not influence funding choices of companies as per pecking order and dynamic trade-off theories.

This study supported an assumption made in market timing theory that company executives think they can exploit opening windows for financing but are unable to instantaneously differentiate between mispricing and dynamic asymmetric information versions of market timing. Baker & Wurgler, (2002) through their study present proof on the persistent effect that equity market timing has on debt-equity mix of a company. They quantify equity market timing as a weighted average of external capital requirements over the past few years, where the weights used were market to book values of the company. Findings of the study indicate that leverage variations are strongly positively related to this market timing measure, hence, Baker and Wurgler,(2002) draw conclusions that a company's equity-debt mix is a collective result of past efforts to exploit the equity market.

Consistent with the Baker and Wurgler, (2002) paper, MBR was employed to capture the firm valuation by the market. The market timing proposition envisages equity issuers to have higher MB than debt issuers. Chang, Hilary, Shih, & Tam, (2010); Dong, Hirshleifer, Richardson, & Teoh, (2006) state that MB and associated variables such as pre-issue stock returns can be used to show managerial skills and growth opportunities. To differentiate market timing from other explanations, this study additionally looked at stocks performance through an analysis of stock returns during the announcement period and long run stock returns post the announcement of a security issuance decision since short-term market reactions may inadequately reflect full extent of the pre-announcement market valuation of issuers. Market timing maintains that companies should issue stock (debt) when they are highly priced (lowly priced). As the market corrects itself, the pre-announcement misvaluation following the issuance announcement will lead to post announcement stock returns that are lower (higher) for high MB (low MB) firms.

Companies that issue equity are assumed to be growth firms. Previous studies stipulate that these firms experience a deterioration of share prices and operating performance after such security issues Loughran & Ritter, (1997); McLaughlin, Safieddine, & Vasudevan, (1996); Spiess & Affleck-Graves, (1999). This decline is attributed to market timing and free cash flow hypothesis considering such issues often coincide with a share price run-up of issuing firms.

Market timing hypothesis states that company's time equity issuance to intervals of improved market performance. This timing behaviour is attributed to the costs of adverse selection as advocated for by the pecking order theory. Market performance is measured using return of the overall market. This study employed the NSE 20 share index returns to measure market performance.

2.2.2 The Trade-Off Theory

It states that the ideal debt ratio of a company is established through a compromise between cost and benefits of borrowing holding the company's assets and investment plans constant. When Modigliani and Miller, (1963) incorporated corporation tax to the original irrelevance theory, an interest tax shield benefit was created for firms using debt. These firms balanced their debt and equity levels by compromising between the present value of interest tax shields and the cost of bankruptcy or financial distress. As long as no adjustments costs were connected to changes in capital structure, existing debt-equity mix remained ideal hence maximizing firm value (Myers, 1984).

Assimilating agency costs to the static trade-off theory implies companies establish debt-equity mix by compromising tax debt shield against agency cost of equity. According to the trade-off theory, an ideal debt-equity mix exists for firms settled through equity and leverage ratios. If existing leverage ratios differ from the optimum, firms then adapt their financing behaviours' in an attempt to get the leverage ratio back to the ideal level. Static trade-off theory envisages an optimum debt ratio for firms settled on through balancing costs and benefits of debt versus equity. Myers, (1977) demonstrated that a cost of debt is when an overly leveraged company is

forced to forego worthwhile investment projects and consequently, companies with worthwhile growth prospects ought to set lower leverage ratios.

High MBRs are frequently linked with favourable growth prospects. Trade-off theory, therefore, forecasts firms with high MBRs offer equity and have lower observed debt ratios. The relevance of the trade-off theory is that it describes how companies are funded partly with debt and partly with equity. Additionally, corporations determine the form and the amount of financing to utilize by trading off the costs and gains of both debt and equity.

2.2.3 The Pecking Order Theory

This theory is established on the assumption that an information gap exists between corporate executives and its investors. Myers & Majluf, (1984) argued that due to information gap with regard to firm value, a high possibility exists that equity will be incorrectly by the market.

Myers & Majluf, (1984) assert firms establish preference conditions with regard to their financing such that internal finance is preferred over outside finance, secure debt is preferred over risky debt and convertibles, and equity is used when no other source is available to the firm. Myers, (1984) argue that an ideal capital structure is at all times not easy to describe given that equity is the first and the last in the hierarchy of finances. Internally generated finances bear no issuance expenses and need no revelation of the firm's proprietary financial information such as the firm's prospective investment chances and benefits anticipated to arise to the firm from making such investments. This indicates why firm growth should be considered as a factor influencing a firm's capital structure.

Alternative ways of financing a company are linked with differing levels of financing costs (Myers, 1984). Consequently, firms establish a financing hierarchy to be followed, where internal funds are first utilised, then debt financing and equity finances is utilised when no other source is available for the firm. The influence of pecking order depends on the equity valuation by market, where if a company's stocks are overrated, the motivation to offer highly valued

equity may override any effect suggested by the theory. Particularly if company stock is highly priced, it may decide equity instead of debt for a financially unconstrained firm as expected.

Pecking order theory considers MBR to be a measure of investment prospects. Putting this explanation into scrutiny, Myers, (1984); Fama & French, (2002) believe a coexisting association between the MBR and the debt-equity mix of a firm would be complicated to resolve with the pecking order model. In circumstances where high past MBR match with high past investment prospects, such periods tend to push leverage to low levels.

The theory is premised on the presence of an information gap where insiders are more informed about the company risks, prospects and value than outside investors. Presence of information gap determines whether firms will utilise in-house funding or outside funding and whether they will choose debt or equity. Presence of information gap support the issue of debt over equity since debt issuance indicates a company management belief on the future prospects of the company's investments and that the share is currently lowly valued (where the share price is highly valued equity issuance will be favoured).

It is also based on the assumption that the trade-off theory costs and benefits are secondly ranked in importance when contrasted with the expenses incurred in offering new securities when information gaps exist. Tangible assets compared to intangible assets have less information asymmetry and have greater value when a company falls into bankruptcy. This signifies that tangibility of assets is a factor that should be put into consideration in capital structure choice of a firm.

This theory postulates that firms should utilised in-house generated funds which may be insufficient for growth. The next available option for expansion is debt financing implying growth firms will have high leverage levels Zeitun & Tian, (2014). Firm growth should therefore be considered as a factor influencing capital structure of a firm.

2.2.4 The 'Irrelevance' Theory

It is the cornerstone of the present theory of capital structure. Modigliani and Miller, (1958) demonstrated that when taxes, information gap, transaction costs and bankruptcy costs are not present and assuming persons and firms can loan using a similar interest rate, firm value will be self-reliant of its financial structure. Modigliani & Miller, (1958) argue profitability of a firm's assets determine its value as opposed to how its assets have been funded using debt or equity. They also demonstrate that the dividend policy adopted by a firm is not relevant in determining its value.

Modigliani and Miller, (1958) assert a company cannot grow its worth through use of debt. Capital structure irrelevance propositions come in two essentially diverse forms. The classic arbitrage-based irrelevance propositions offer surroundings in which investors' arbitrage maintains firm value to be autonomous of its leverage.

The second irrelevance proposition concludes that given a company's investment strategy, the dividend pay-out policy it follows does not influence the prevailing valuation of a stock and the wealth it offers its stockholders(Miller & Modigliani, 1961). According to this theory, firm value is influenced by assets profitability as opposed to the way the assets are funded by use of debt or equity. A profitable firm might keep more of its earnings resulting to lower leverage levels according to pecking order theory. A similar result can achieved through indifferent preservation of profits in perfect markets, Modigliani & Miller, (1958) or from making use of interest tax shield in the more realistic tax environment (Modigliani & Miller, 1963). Hence, the profitability of a firm should be considered as a capital structure determinant.

Profitable firms face more idle cash problems which can be resolved by increasing the amount of leverage the firm holds. Managers of these firms may sub optimally use idle cash or for personal gain like in empire building and perquisites consumption instead of investing in opportunities aimed at shareholder wealth maximization. According to Jensen, (1986), in the agency theory, a solution to this problem can be achieved through growing of ownership percentage of the

corporate executives or by expanding debt in capital structure, hence minimizing the amount of idle cash available to corporate executives. Leverage is thus used as a mechanism to streamline corporate executive's interests with those of stockholders since bankruptcy is costly for management. This implies how significant liquidity is as a factor influencing capital structure.

2.3 Empirical review of market timing, capital structure and their relationship.

This section examines and discusses the work and findings of different scholars in relation to the objectives of this research. This section was analyzed as per the research objectives. The first objective of the study sought to examine presence of market timing in securities issuance by listed firms at the NSE. While the second objective analyzed whether any relationship existed between market timing and capital structures of listed firms and the third objective aimed at assessing the manager's opinions on market timing.

2.3.1 Presence of Market timing

First objective of the study sought to examine presence of market timing in securities issuance by listed companies at the NSE. Market timing enables firms to minimize cost of capital while maximizing shareholder value. If managers of listed firms at the NSE market time their securities issuance this would imply no optimal capital structures for these firms as companies would choose the type of financing that is overvalued by the market. Observed capital structures would thus be the collective product of past efforts in timing the financial markets. In the reviewed literature market timing of security issuance decision has been analyzed from the following perspectives whose presence is taken to signify attempts by corporate executives to exploit chances of market timing;

2.3.1.1 High current market valuations as compared to book and past market valuations

In the reviewed literature, the timing of equity issues has been analyzed through the inclination of companies to offer equity when they are highly priced by the markets, a result frequently understood as proof of market exploitation efforts. Taggart, (1977) examined the security

issuance decisions and the relationship that existed between them and measures of ideal capital structures and debt capacity. In the study, an integrated model of corporate funding models was developed; through which evidence was found to support the perception that variations in market values of equity and debt were essential elements influencing US companies security issuance decisions.

Coherent with the findings of this study, Marsh, (1982) sampled 748 all cash offers of equity and quoted debt by the UK listed firms between 1959 and 1970 to investigate how these companies made the debt-equity choice. Independent variables used in this study included historical averages, risk, company size and asset configuration which were considered to be significant determinants of debt ratios and market conditions which were used to proxy for short term timing considerations in securities issuance. In this study, a descriptive model of the choice between equity and debt was advanced. Results from this study indicated that history of security prices as well as prevailing market conditions impacted the decision to issue debt or equity. Further evidence suggested firms appeared to select the financing instrument to use with target levels to be achieved in mind in as far as long run and short run debt ratios are concerned in proportion to overall debt of the firm.

Agreeing with these results is a study by Elliott et al., (2008) who examined market timing and the debt-equity choice in the US. Sampling 9,172 non-financial firms divided into 3,781 public seasoned equity and 5,391 non-convertible debt offerings during the period 1980-1999 and utilizing an earnings-based valuation model which enabled them to distinguish between equity misvaluation from growth alternatives and time-varying adverse selection; thus, circumventing multiple interpretations of MBR. Results from the study indicated that companies whose shares are overvalued and whose market valuation exceeds the intrinsic valuation as generated by the residual income model had a high probability of offering equity, while the fairly valued or undervalued, were more likely to issue debt. They concluded that the mispricing of equity by the market plays an essential, if not commanding role in the security issuance decision.

Further evidence on the importance of overvaluation when companies are making financing decisions is echoed by Siagian & Saad, (2011) in their study of Indonesian firms. The study comprised of 68 manufacturing companies for the period 1994 to 2008, they presented three arguments about the effectiveness of market timing theory. First, when current market values are high as well as when market value of the past is high managers tend to offer equity in lieu of debt. Secondly, through an analysis of estimated earnings prospects, high optimism and high enthusiasm of investors will drive companies to sell equity. Thirdly, companies with high growth utilize market timing theory in making their financing decisions since at this stage the company attracts a lot of market sentiment. These arguments indicate how important overvaluation of a company stock is when it sells its stake in the market.

In accord with the outcomes of the above studies, Bougatef and Chichti, (2010) used Tunisian and French listed companies to examine the significance of market timing considerations on the debt-equity choice. Outcomes of study indicated that, high market valuations and improvement in market performance triggered firms to issue equity which concurs with the market timing theory. This makes leverage levels in these firms to become lower in the short run and this effect lasted for more than eight years.

2.3.1.2 Interest rates

Firms that issue long term debt tend to make such issues when rates of interest are at their minimum, prior to their increase. Periods of low rates of interest may be viewed by managers as favourable times to issue debt with the aim of acquiring capital before interest rates increase which may be viewed as efforts to exploit money markets. Henderson et al., (2006) sampled 195,375 security issues for the period 1990-2001 in several world markets; they established a negative association between quantity of debt issued and level of interest rates in all countries they studied. This relation was statistically significant in most of the cases. They concluded that firms in these countries appear to time both their long- and short-term bond issues to correspond with low contemporaneous rates.

This results collaborate survey evidence from US and Canadian firms Graham & Harvey, (2001) and from European firms Bancel & Mittoo, (2004) in which CFOs and managers claim that when making debt issuance decisions they actively attempt to exploit the debt market by picking favourable moments to make such issues when interest rates are quite low.

Further conformity of this evidence is found in a study by Baker, Stein, & Wurgler, (2003) who established forwarding-looking market timing in the debt market. Thus, when managers are forecasting future interest rates with an expectation of them going down they will offer short-run debt whereas when interest rates are expected to increase long-term debt is offered. Baker, Stein, et al., (2003) established that debt market condition considerations including real short-term rates of interest, inflation and term structure drive the share of long term debt at the aggregate market level.

Contradicting these studies is a study by Barry, Mann, Mihov, and Rodriguez, (2005) who sampled 14,000 debt offerings between 1970 to 2001 on US firms. This allowed them to study issues that could not be tested with macroeconomic data. They found proof of backward-looking market timing whereby firms offer higher levels of debt for investment spending and equity when rates of interest are low.

2.3.1.3 Pre and post-issuance stock returns performance of firms

Market timing is also detected using pre and post-issuance stock returns of firms that raise capital through IPOS, SEOS and debt. Findings from these studies indicate that the performance of these firms deteriorates after such issues which are consistent with market timing. In a study of US companies that went public in the period from 1974 to 1982, (Ritter, 1991) used a sample of 1,526 IPOs and utilized two measures namely the CAR and the 3-year buy and hold returns to evaluate long-term performance of Initial public offerings and a set of similar firms. Findings from this study indicated substantial poor performance of the offering companies when compared to that of a sample of similar firms starting from the first public trading day up to three years after the IPO. Considerable variation in the underperformance was established when the

stock returns were compared on a year-to-year basis and when compared across industries with companies that issued their IPOS during high-volume years doing the worst. They concluded that these patterns are exhibited by IPO markets in which investors are occasionally overly confident about the earnings prospects of young growing firms, and in markets where companies exploit "opening windows of opportunity for financing" when there is an overvaluation of their share prices by the market.

Conforming findings are established in a study which sampled 1,247 primary SEOs, 620 by NASDAQ-quoted companies and 627 by NYSE- and Amex-quoted companies in the U.S between 1975-1989 by Spiess and Affleck-Graves, (1995). Findings from the study indicate that post-offering performance experienced by SEOs firms can be compared to that of IPO issuing firms. The median return for SEO firms in the five years post the offering is 10.0% whereas similar size, same industry non-issuing firms record a median 5-year return of 42.3%.This underperformance persists even when the firms are matched on the basis of MBR and size as opposed to the industry and size classification. These findings imply that corporate executives exploit overvaluation in both the IPO and SEO markets to issue equity.

In line with the above studies outcomes is a study by Altı and Sulaeman, (2012) who sought to establish when high share returns prompt issuance of equity. Using a sample of 2,614 SEOs announcements and 2,203 completed SEOs in the US; they show that firms timed their securities to periods of high stock returns, conditional on such issues being accompanied by high levels of demand by institutional investors.

Further underperformance of stocks in firms making security issuance is also confirmed in the case of companies issuing debt. Spiess & Affleck-Graves, (1999) examined stock returns long term performance after debt issues in the US. This study used a sample consisting of 392 straight debt offerings and 400 convertible debt issues between 1975 and 1989. Results from the 392 straight debt issuers indicated that the median sample company underperformed a similar size and MBR matched firm by 19% in the 5 years after the debt issue while for the 400 convertible debt issuers a median company recorded poor performance when compared to its matched

counterpart by 20% in the 5 years post the convertible debt issue whereas the average holding-period return for studied companies is 37% lower than the mean for the matched control companies.

Results from this study verify that convertible debt issues pass on negative information to the market, with an under-reaction when the announcement is made. Results of the study propose that debt issues just like equity issues signal firm overvaluation. Conclusions from this study indicate that highly valued companies can issue security of any type and the underperformance of stocks and operating performance points out to firm's that take advantage of opening windows for financing when their securities are overvalued by the market.

2.3.1.4 Market activity or market performance

Market activity can also be used to examine market timing. The performance of the capital and money markets influences the debt-equity choice made by firms. Doukas et al., (2011) examined motivations of debt offering during hot-debt market periods and its influence on the capital structure. Sampling 6,110 firm-annual debt issues, made up of all new, nonconvertible, public bond offerings from 1970 to 2006 in the US markets, the study established that, when the conditions prevailing in the capital market were perceived as conducive an indicator of market timing, and adverse selection costs of equity (high information gap in equity) were vital considerations that influenced certain companies to offer high levels of debt in hot-than in the cold-debt market periods. Further confirmations from this study indicate that when equity was unfavourable companies responded by issuing debt which is subject to less information asymmetry. The influence of hot-debt issuance on debt funding is found to be significant when alternative hot-market measures are used and controlling for other effects and this impact lasted for more than 5 years post the hot debt issuance.

Consistent findings were established in a study by Lucas and McDonald, (1990) who studied 549 SEO by NYSE/AMEX industrial companies during the period from 1974 to 1983. Using an information-theoretic, infinite horizon model of the equity issuance choice, they posit that equity

issuances are preceded by on average an abnormal positive share return and an abnormal rise in market which is consistent with market timing theory. Agreeing with these results is a study by Marsh, (1982) who sampled 748 all cash issues of equity and quoted debt made by UK quoted companies between 1959 and 1970 to investigate how these companies made their debt-equity choice. Results from this study indicate that companies are heavily influenced by market conditions and past history of security prices in choosing between equity and debt.

2.3.1.5 Market to book ratio

Other studies including Baker and Wurgler, (2002); Hovakimian, (2006) focused on MBR to capture timing attempts where market timers were identified as companies that raise capital at high market valuations. Market timing hypothesis predicts equity issuers to have higher MB than debt issuers. In their study of 2,839 IPO event observations by US firms in the period from 1968 to 1999, Baker & Wurgler, (2002) established that companies with high levels of leverage raised capital when their MB values were high and companies with low levels of leverage are those that raised capital when their MB ratios were low. Logical with these findings is a study by Hovakimian, (2006) whose findings imply that equity offerings are timed to periods when MBRS are high. The study sampled 56,259 U.S firms covering the duration from 1983 to 2002 and regression analysis to investigate market timing. Findings from this study indicated that the higher the weighted average of past MBR for a firm was, the higher the probability of the firm issuing equity in the current period and the lower the weighted average of past MBRs the higher the possibility that debt would be issued in the current period.

2.3.2 The debt-equity choice of a firm

The decision to issue debt or equity for a firm is influenced by several factors which are considered essential determinants of capital structure. These factors include; firm profitability, firm growth, tangibility of assets, risk, firm size, liquidity among others. Various studies have investigated these factors that influence capital structure. Gathogo & Ragui, (2014) utilised a panel regression model sampling 200 consisting of quoted companies, unquoted firms and small

and medium enterprises covering the period 2000 to 2010 with an aim of finding out what determined capital structures of these companies. Findings from this study demonstrated that firm size, asset growth, profitability, liquidity and cost of debt had a positive effect on capital structure of a company whereas risk of business and industry type were not strongly correlated to capital structure of a firm. Modified Pecking Order theory was confirmed by this study.

Ngugi, (2008) evaluated capital structure funding behaviour of 22 firms trading on the NSE for the period starting 1991 to 1999. Reduced form equations derived from static trade-off model and pecking order hypotheses were derived in this study, estimated and tested using panel data techniques. A pecking order model with an adjustment process was confirmed by this study. Further findings indicated that Kenyan listed firms prefer to fund their investments with short-term debt and bank overdrafts despite the uncertainty and financial risk associated with this mode of financing and these resulted in a reduction in a given firm's value. The study established major determinants of capital financing behaviour for Kenyan listed firms to consist of non-debt tax shields, local capital market infrastructure and information asymmetries. Ater, (2017a) used a cross-sectional survey research design and adopted the weighted least squares regression technique to sample 36 non-financial listed companies at the NSE covering the period between 2011 through to 2015. Findings from this study indicated a statistically significant association between capital structure and firm value for non-financial listed companies on the NSE. In the study long term debt was found positively influence firm value in a similar way like equity capital.

The debt-equity choice of a firm is influence by the following factors which are considered important determinants of capital structure;

2.3.2.1 Firm size

Two contradicting views exist on the association between firm size and leverage. As per the trade-off theory, larger companies are well diversified, have stable cash flows and their probability of bankruptcy less as compared to small smaller. Therefore, large companies favour

debt to equity funding (Myers & Majluf, 1984). Marsh, (1982) assert owing to high level of fixed assets, stable cash flows, economies of scale and creditworthiness, large companies have superior negotiating authority over lenders and can borrow at relatively lower rates. Rajan and Zingales, (1995) in a study of G-7 countries noted that large companies tend to be more diversified and hence they have a lower probability of default. This argument concurs with predictions of trade-off theory which proposes that large companies should borrow more since they are well diversified, less prone to bankruptcy with relatively lower bankruptcy costs. In addition, large firms have lower agency costs such as relatively lower monitoring costs due to their less volatile cash flow and easy access to capital markets. Thus, large firms are expected to hold more debt in their capital structure than equity, hence, a positive relationship between size and leverage in a firm.

Contradicting this view, pecking order theory suggests a negative relationship between firm size and leverage since large firms have less information gaps which reduces chances of their equity being mispriced by market which motivates large firms to finance using equity hence a negative association between firm size and leverage. In this study, firm size is expected to be negatively correlated with leverage.

2.3.2.2 Tangibility of assets

Capital structure theories assert the debt-equity mix choice made by a firm is influenced by the type of assets it owns. Trade-off and pecking order theory contradict one another on whether tangible assets have a positive or negative influence on capital structure. Trade-off theory envisages positive association, Modigliani & Miller, (1963) whereas pecking order, Myers & Majluf, (1984) forecasts negative association. Tangible assets offer high collateral value relative to intangible assets; they also have a high liquidation value which serves as security for debt and helps in reducing monitoring costs thereby enhancing a company's debt capacity. Tangible assets reduce the cost of financial distress. However, if tangible assets cannot be easily converted into cash firms may have a lower debt capacity. Prior literature suggest a positive association between tangibility and leverage Jensen & Meckling, (1976); Rajan & Zingales, (1995). Agency

theory on the other hand, envisages a negative association between leverage and tangibility of assets. A positive association is expected between tangibility of assets and leverage in the current study.

2.3.2.3 Profitability

Conflicting predictions exist from theory on influence profitability has on leverage. A negative association between profitability and leverage is envisaged in pecking order theory, Myers & Majluf, (1984) since firms that are profitable have the ability to generate internal funds and would therefore prefer to finance with internally generated funds. Trade off theory on the other hand proposes the association to be positive since profitability should be interpreted as a indication of company performance- firms ability to repay their debts. Additionally, in trade-off theory, agency costs, taxes and bankruptcy costs drive more profitable companies towards elevated leverage levels. Profitability and leverage are expected to have a negative relationship in the study.

2.3.2.4 Liquidity

Due to their ability to meet contractual obligations as they fall due, companies with high liquidity ratios are expected to borrow more as per trade-off theory which forecast a positive association between liquidity and leverage. On the flip side, pecking order theory forecasts a negative association between leverage and liquidity reason being very liquid companies opt to source funds internally for new investments. In the study, a negative association is expected between liquidity and leverage.

2.3.2.5 Firm growth

Assets that add value to a company are classified as growth opportunities. Rajan & Zingales, (1995) assert that companies on a growing trajectory are less likely to issue debt in the first instance, and therefore leverage is expected to be negatively related to growth opportunities. Myers & Majluf, (1984); Fama & French, (2002); Jensen & Meckling, (1976) argue that owing

to high chances of passing up profitable investment opportunities by highly levered firms, companies with high future growth opportunities should as a priority consider more of equity financing, given that such investments in effect move wealth from shareholders to debt holders (G. Huang & Song, 2006). For that reason, a negative association is expected between growth opportunities and leverage. As MBR is used as a proxy for growth opportunities, Rajan & Zingales, (1995), a further reason to expect a negative association is that firms with high MBRs are exposed to higher financial distress costs which will drive them to issue equity. A number of empirical studies corroborate the negative relation, Rajan & Zingales, (1995) whereas other studies confirm a positive association between growth opportunities and leverage (G. Huang & Song, 2006).

2.3.2.6 Risk

Debt is cheaper than equity as a result of tax shield on interest payments. Debt however, puts pressure on a firm since interest and principal are obligatory payments which if not settled a firm risks financial distress (Ross, Westerfield, & Jaffe, 2006). Owing to agency and bankruptcy costs, firms may fail to exploit tax benefits of fully financing their investments using debt as recommended for by trade off theory. A firm's motivation to reduce its debt levels would be higher if it is exposed to such costs. A company's operating risk influences a firm's vulnerability to these costs. This is because the higher the volatility of a company's earnings stream, the greater its probability of failing to honour its obligations as they fall due and hence being exposed to such costs. a positive relationship is expected between risk and leverage in the study.

2.3.2.7 Information asymmetries

Market timing theory is premised on assumption of information gap between corporate executives and investors in those firms. Corporate executives exploit equity markets based on private information they have about the future value of the firm or exploit debt markets based on public information such as term spread or predictable excess bond returns, Bruinshoofd & de Haan, (2012) implying that equity is subject to more information asymmetry compared to debt.

Equity market timing is facilitated by presence of low information gap in equities market signifying a negative relationship between information asymmetry and leverage. On the flip side, investors turn to debt markets owing to high levels of information asymmetry in the equities market, implying a positive relation between leverage and information asymmetry. In this study, both relationships are expected to be confirmed owing to both debt and equity issues being studied.

2.3.2.8 Non-debt tax shield

It is a measure of amount of earnings that are not subject to tax due to non-debt tax shield that a firm has. Non-debt tax shield can be decomposed into investment tax credits and depreciation. Lower debt ratios are observed for companies with higher non-debt tax shield since it lowers income left to shelter the firm using debt interest. A negative relation between leverage and non-debt tax shield is expected in this study.

2.3.2.9 Local capital market infrastructure

Capital market conditions do not remain same forever. Depending on the economy there may be a boom while at other times there may be depression. Sometimes capital market infrastructure is enabling while at other times it is limiting. If there is depression in the market as well as pessimistic business conditions, a company should not issue equity since investors would prefer safety. In the current study, a positive relationship is expected between local capital market infrastructure and leverage.

2.3.3 Relationship between market timing and capital structure

The second objective of the study sought to examine association that existed if any between market timing and capital structure of listed firms at the NSE. Market timing is a theory of the manner in which firms and corporations in the economy resolve to fund their investments using debt or equity instruments. Baker & Wurgler, (2002) assert that market timing is a top on the list factor corporations put into consideration when issuing debt or equity. This suggests that firms

select type of funding that seems highly valued by financial markets, they care less whether they finance with debt or equity.

A strongly negative relationship is established between leverage and their market timing measure by reviewed studies on relationship between market timing and capital structure. Baker & Wurgler, (2002) study on persistent influence market timing has on capital structures for US firms can be considered to be the starting point of a wide range of research in this area of capital structure. Majority of studies on market timing and capital structure perhaps, can be considered as reactions to Baker & Wurgler, (2002) findings that market timing influence on capital structure is persistent, lasting more than 10 years. Using a sample of 2,839 IPO event observations on US firms for the period from1968 to 1999, they established that firms that raised capital when their market valuations were high as measured by MBR had low leverage whereas are those that raised funds when their market valuations were low. Ordinary least squares regression model was used to achieve these results where leverage was the response variable and the "external finance weighted-average" MBR was the predictor variable. Their explanatory variable was a weighted mean of a firm's past MBRs which assumed high values for firms that issued equity(debt) when their MBRs were high (low).

Findings from the study established that leverage had a strong negative relationship to the historical market valuations measure. An economically significant and statistically robust effect of past market valuations was established by the study which led to the conclusions that variations in market valuations had large effects on capital structure that persist for at least a decade. As a result, they defined capital structure of a company as the collective product of past efforts to exploit the equity market.

Baker & Wurgler, (2002) argued that their findings could not be described using traditional financing theories. Consequently, they developed market timing theory in which an optimal capital structure does not exist. According to the theory, the target adjustment speed for capital structures is zero given they do not rebalance their debt and equity positions. Over/undervaluation of securities is sole determinant of corporate financing decisions. Agency

costs, non-debt tax shield, time-varying adverse selection cost and interest tax shields assume no role in security issuance decisions according to this theory.

Two criticisms against the work of Baker & Wurgler, (2002) have been identified. First, Hovakimian, (2006) in a study of US companies re-evaluated Baker & Wurgler,(2002) conclusions on firm behaviour and capital structure policy. They used the same sample size and methodology used by Baker & Wurgler, (2002) with a few changes on their measures. Their work questioned Baker & Wurgler, (2002) conclusion that "capital structure is the collective product of past efforts of timing the markets" as no significant proof was found to support market timing theory for debt issues and debt reduction in firm's debt-equity choices in the study. Further findings from this study indicated that although equity transactions may be conducted in such a manner and aimed at timing conditions prevailing in the equity market, their effect was not significant and resilient on capital structure. The study established that MBR impact reveals growth opportunities of firms as opposed to equity market timing.

The second problem with market timing arose from inappropriate use of historical cost MBR to represent a company's market timing efforts. Even though this concern was highlighted by Baker & Wurgler, (2002) in their study, some researchers assert that they trust their conclusions conform to equity mispricing in the presence of irrational investors or corporate executives; alternate explanations exist for this ratio. Use of MBR to examine existence of market timing has so far been overwhelmed by difficulties resulting from multiple interpretations of what the ratio captures including information asymmetry, growth opportunities, debt overhang problems, current state of economy and capital intensiveness of a firms technology. Alti, (2006); Elliott et al., (2004) and Hovakimian, (2006) argued that, Baker & Wurgler, (2002) findings were not as a result of equity market timing but were mainly as a result of the presence of growth opportunities in those firms. Consequently, many studies have opted to use alternative techniques to evaluate market timing such as earnings-based valuation model used by Elliott et al., (2008) in their study.

Contradicting this persistent impact market timing has on leverage is another study by Alti,(2006) who studied the persistent influence of market timing on the debt-equity mix.

Sampling 2,200 IPOs, 1,891 IPOs issued in high IPO volume months months and 309 IPOs offered in low volume IPO months for the period from 1971 to 1999 in the US. The market timing measure utilised by the study is high IPO volume market and low IPO volume market where a high IPO volume month is described as one that has high number of issuers. He argued that, if issuers regarded high IPO volume markets as windows of opportunity with a momentarily low cost of equity capital, they responded by offering more equity than is expected. Equally, equity offerings would be kept at a minimum in low IPO volume markets sine market conditions were regarded as less favourable. Results from this study exhibited that market timing depressed leverage in the very short term and this adverse effect of market timing on leverage had very low persistence. This persistent influence of market timing on capital structure totally disappeared two years post the IPO event. Conclusions from this study showed that market timing is essential in influencing the financing activity of a firm.

Conforming to the study conducted by Alti,(2006) is a study of Dutch quoted company's by De Bie & De Haan, (2007) who studied market timing and capital structures using an unbalanced panel of 135 non-financial firms quoted in the AEX covering part or all of the period from 1983 to 1997. Results emanating from study yielded proof of market timing in that share price run-ups increased chances of equity and dual issues. Effects of share price run-ups on the alternatives between issuance of equity, debt or both are consistent with predictions of market timing theory. Contrary to the prevailing evidence for US firms, the study failed to confirm persistent effect market timing has on capital structures of Dutch companies.

Further contradiction as pertains market timing theory was found in a study that utilized an unbalanced panel data set containing 754 firms, among which 165 were UK firms , 241 US firms and 348 continental European firms for the period from 1991 to 2000, through which Bruinshoofd & de Haan,(2012) provided comparative global proof on impact of market timing on corporate capital structures. The study utilized GLS which unlike OLS allows the presence of autocorrelation within panels and cross-sectional correlation and heteroscedasticity across panels. They demonstrated that the negative correlation between historical MBR that existed for US firms did not apply to UK and continental European firms. Continental European companies

raised their leverage ratios when share prices were high by timing long-term debt issues which strongly inclined to pecking order theory where debt is preferred over external equity.

Market timing confirmation is achieved using of debt in a study done in China by Zhou et al., (2012). Using company-level data for corporate debt offerings by 3040 US firms for the period from 1970 to 2006, they employ three models the horse-race model, temporal lead-lag model, and the VAR model to test two theories. They investigated if managers relied on theoretical strategies when issuing debt, which involved betting on the future debt market condition, or they made their debt issues in response to variations of prevailing market conditions as compared to past. Put differently, they sought to establish whether forward-looking (prediction) or backwards-looking (reaction) market timing dominate companies' debt offering decisions. Findings from the study indicated that a company's debt issuance heavily depended on backwards looking to past information. Thus, corporate managers were inclined to offer debt when rates of interest were particularly low in comparison to historical levels. The study found support for backward- market timing.

Further support of market timing theory has also been found in Africa, through a study by Bougatef & Chichti, (2010). Sampling 30 publicly traded Tunisian companies and 100 non-financial French companies and applying panel data regression to examine significance of market timing considerations in security issuance choices for the period from 2000 to 2008. Logical with market timing theory, their findings revealed that companies tended to offer stocks when they were overvalued by market and after market performance improved. Consequently, these companies became underleveraged in short-run and this effect of market timing on capital structure continued for more than eight years.

Agreeing with these results is a study conducted by Reddy & Tran, (2017) who examined capital structure and market timing using data from both developed and developing countries. Sampling 12,181 publicly listed non-financial and non-utility companies for the period 2007 to 2015, they employed ordinary least squares (OLS) measure utilized by Baker & Wurgler, (2002). Findings from the study indicated equity market timing influence on firms' capital structure was persistent

for countries with well-developed stock markets and institutional structures. However, individual country regression results were much weaker and insignificant for many countries which suggested that stock market and institutional environments in many developing countries were not well developed which impacted on study results where market timing persistent effect was not confirmed.

Contrary to the findings of Reddy & Tran, (2017) and Bougatef & Chichti, (2010) studies, Moyo, (2016) investigated security issuance decisions of financial services companies in South Africa. The study tested authenticity of pecking order, dynamic trade-off and market timing theories in describing the financing behaviour of 29 financial services companies quoted on the JSE during the period from 2003 - 2012 The study employed the modified, Bruinshoofd & de Haan,(2012) External Finance-Weighted Average MBR as the market timing measure. Results of this study rejected both market timing and pecking order theories. Conclusions drawn from the study indicated that stock performance and returns did not influence security issuance decisions of these companies. Excluding the correlation between leverage and company growth, results strongly confirmed dynamic trade-off theory. Thus, JSE listed financial services firms had targeted ideal capital structures which they deliberately adjusted towards.

In Kenya, Ater, (2017b) reviewed current literature on relationship between capital structure and market timing theory of capital structure in the contact of emerging markets. Empirical studies reviewed revealed that market timing influences capital structure and company's performance. Additionally, market timing impact and magnitude on capital structure is not clearly stated as different studies revealed mixed results. One set of the studies discovered that market timing creates capital structure distortion of companies while the other set claimed that the impact of market timing on capital structure has been inconsistent.

2.3.4 Stakeholders views on market timing

The third objective of the study sought to ascertain finance managers view with regard to market timing by listed firms at the NSE. Managers' confirmation of market timing of security issues has been viewed as the most convincing confirmation of market timing by companies as follows;

From reviewed literature, stakeholders who included Chief Finance officers (CFOs) and managers agreed to have market timed their security issuance decisions in anonymous surveys which has so far been deemed as most convincing proof of market timing. Graham & Harvey, (2001) performed an anonymous survey on 392 CFOs in the US and Canada firms regarding capital budgeting, cost of capital and capital structure. Findings from these surveys indicated that 67% of CFOS were in agreement that the amount by which their share was undervalued or overvalued was a key consideration in issuing equity and nearly as many agreed that if their share price had in recent times increased the price at which they could sell was 'high'. In the survey, equity market prices were viewed as more important than 9 out of 10 other factors considered in the common stock issue decision and more important than all 4 other factors considered in the convertible debt issue decision.

Graham & Harvey, (2001) also sought to find out whether CFOs attempted to time interest rates through debt issuance when they felt market interest rates were particularly low. They found out a moderately strong evidence for such market timing of interest rates. Evidence from the survey suggested that market timing was crucial for large firms which implied that firms with large or sophisticated treasury departments were more likely to time interest rates. Further evidence suggested that firms also market time interest rates when issuing short-term debt. When CFOs felt that short rates were low as compared to long rates or expected long term rates to decline, they agreed to borrow using short-term debt.

Agreeing with survey results is another anonymous survey of managers of 707 firms in sixteen European countries by Bancel & Mittoo, (2004), who sought to investigate the link that existed between theory and practice of capital structure applying to all countries with varying legal

systems and structures. Evidence from this survey indicated that a company's ability to meet unexpected expenses and investment opportunities as well as earnings per share dilution were the two most important factors of capital structure decisions for European companies. Managers of these firms used the windows of opportunities for financing in raising capital and they also valued hedging considerations. When selecting the maturity of debt and when raising capital abroad, the primary factor these managers put into consideration appeared to be their hedging considerations.

European managers in this survey seemed to worry about two factors when constructing their capital structure choices; financial flexibility and the influence such decisions had on the financial statements. The ability to meet unexpected expenses and investment opportunities was identified as a key factor that the European manager's put into consideration when accessing financing externally despite the economic projections in their countries. This financial flexibility was achieved through choosing an opportune time to make an issue based on the valuation of equity by the market or the prevailing interest rate levels which tended to be consistent with the window of opportunity hypothesis. Further evidence from this survey suggested that managers tend to be concerned about financing decisions impact on financial statements. The dilution of earnings per share was a major concern for managers when issuing shares and was considered as an advantage when issuing convertible debt.

2.4 Research gap

Regarding a firm's investment financing decisions, the Modigliani-Miller theorem opened the literature on the fundamental nature of debt versus equity. The capital structure of a firm is the result of the transactions with various suppliers of finance**.** In perfect capital markets world of Modigliani & Miller,(1958), different forms of financing costs do not vary in isolation resulting with lack of advantage derived from opportunistically selecting between equity and debt. However, financing clearly matters due to differences in taxes rates, levels of information and costs of agency. Theories of capital structure also differ in how these factors are interpreted with each emphasizing on some cost and benefits of financing strategies alternatives.

As pertains market timing theory, there is no ideal capital structure, since market timing decisions accumulate over time into the capital structure outcome (Baker & Wurgler, 2002). The theory states that capital structure decisions are made based on capital market circumstances. Interest rate levels and share prices are the driving forces for debt and equity issuance decisions respectively. A company's decision to issue equity depends on the share market performance and the present valuation of its stocks. Companies only issue stocks when they believe the firm's stocks are presently overvalued, otherwise they will issue debt (Barclay & Smith, 2005). Various evidence points to market timing being an important aspect of real financial policy. This evidence emanates from various analyses of real financing decisions, analyses of long-term returns post equity issues and repurchases, analyses of realized and forecast earnings around equity issues, and managers surveys.

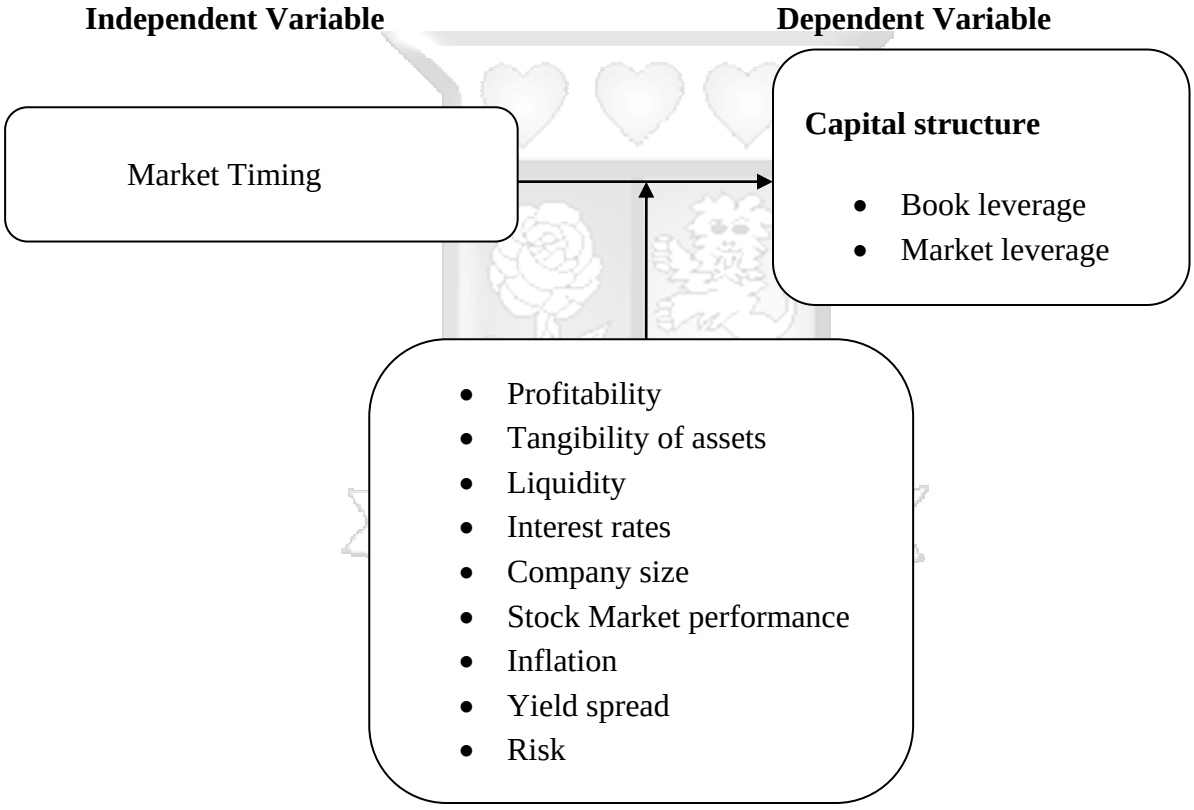
From reviewed literature, it is evident academic research on market timing and capital structure still give controversial, inconclusive and mixed findings. According to market timing theory, managers have confidence that they can time the equity market but are not in a position to immediately differentiate between mispricing and the dynamic information asymmetry version of market timing and the sole determining factor of corporate financing is overvaluation and or undervaluation of securities. Factors like non-debt tax shield, interest tax shields, agency and the time-varying adverse selection costs do not influence security issuance decisions.

Developed financial markets such as US, a well-established view is that firms take advantage of market valuations with regard to their intrinsic valuations when making financial decisions. What remains unclear is whether firms in developing financial markets such as Kenya follow a similar behaviour. Therefore, the study sought to ascertain whether managers of listed firms at the NSE market time their security issues and the extent to which the presence of market timing affect or drive their funding decisions and the observed capital structures.

2.5 Conceptual framework on market timing and capital structure

A conceptualization of the major variables under examination in the study is brought out in this section. Market timing is the independent variable whereas capital structure whose proxies are both book leverage and market leverage are dependent variables. Control variables utilised in the study include profitability, company size, tangibility of assets, liquidity, stock market performance, real interest rates, inflation, yield spread and risk.

Figure 1.0 : Conceptual framework



Source: Author(2019)

2.5.1 Operationalization of variables

A description of how the variables utilised in the study were measured is done in this section. This has been depicted in the table 1.0.

Table 1.0: Study Variables

Variables	Abbreviations	Authors recommending such measurement	Proxy	Definition
Dependent variables:				
Capital structure				
Book leverage	Book-Lev.	(Baker & Wurgler, 2002); (Alti, 2006)	Book debt / Total assets	D/A
Market leverage	Market Lev	(Baker & Wurgler, 2002) ;(De Bie & De Haan, 2007)	Book debt / Total assets-book equity + market equity	D/(A-BE+ME)
Independent variable:				
Market timing	MBR	(Baker & Wurgler, 2002);(Alti, 2006);(De Bie & De Haan, 2007);(Bruinshoofd & de Haan, 2012)(Bruinshoofd & de Haan, 2012);(Vallandro et al., 2014); (Hovakimian, 2006)	Total Assets - Book Equity + Market Equity/Total assets	(A-BE+ME)/A
Control variables:				
Profitability	PROFIT	(Baker & Wurgler, 2002) ;(Alti, 2006) ;(De Bie & De Haan, 2007) ;(Elliott et al. 2008); (Vallandro et al., 2014); (Hovakimian, 2006)	Earnings Before Interest, Taxes, Depreciation and amortization / Total Assets	EBITDA/A
Risk	RISK	(Vallandro et al., 2014)	Standard Deviation of Profitability	σ (Prof)
Inflation	INFLATION	(Zhou et al., 2012)	The annual percentage change of the CPI in each monthly observation	The annual percentage change of the CPI in each monthly observation
Yield spread	YIELD SPREAD	(Zhou et al., 2012)	10-year constant maturity Treasury bond rates - the 91-day treasury bill rate	10-year constant maturity Treasury bond rates - the 91-day treasury bill rate
Company size	SIZE	(Baker & Wurgler, 2002) ;(Alti, 2006) ;(De Bie & De Haan, 2007) ;(Elliott et al. 2008); (Vallandro et al., 2014); (Hovakimian, 2006)	Natural logarithm of sales	Log (S)
Tangibility of assets	PPE	(Baker & Wurgler, 2002) ;(Alti, 2006) ;(De Bie & De Haan, 2007) ;(Elliott et al, 2008); (Vallandro et al, 2014); (Hovakimian, 2006)	Fixed Assets (PPE) / Total Assets	FA/A
Liquidity	LIQUIDITY	(Vallandro et al., 2014)	Current Assets / Current liabilities	CA/CL
Stock Market Performance	MARKET	(Marsh, 1982)	NSE 20 share index returns	NSE 20 share index returns t-1 – NSE 20 share index returns t
Real Interest rate	INTEREST	(Elliott et al, 2008); (Vallandro et al, 2014)	Average annual interest rate as announced by CBK	Average annual interest rate as announced by CBK

Source: Author(2019)

The control variables utilised as major determinants of leverage are those proposed by Rajan & Zingales, (1995) and utilized by Baker & Wurgler, (2002) in their study. Six other control variables were added which are regarded as possible determinants of capital structure.

Even though the pecking order and the static trade-off theories postulate negative or positive relationship between leverage and its determinants, equity market timing theory does not automatically settle on a direct or inverse relationship between leverage and the determinants of capital structure. According to market timing hypothesis, firms change their leverage levels using equity issue or debt issue strategy whenever they take cognizance of the windows of opportunities in stock or money market and not necessarily depending on their characteristics such as size, liquidity, tangibility or profitability.

However, as per the independent variable, an inverse relationship is expected between leverage and the market timing measure of MBR, since companies with a greater (lower) MBR tend to issue more stocks (debt) so as to gain from the overvaluation of their securities and the low-cost funds, resulting in a reduction (increase) in leverage, as projected by the market timing theory.

2.6 Summary of the chapter on literature review

This chapter begins by discussing relevant theories on which this study was anchored on; market timing, trade-off, pecking order and the 'Irrelevance' theories. The theories are discussed to enhance the understanding of the market timing, MBR, capital structure, profitability, liquidity, company growth, tangibility of assets, stock market performance, stock returns and operating performance. The chapter also included an empirical analysis of the study objectives and the development of the hypothesis tested in this study. The research gap was then identified. The chapter concluded by presenting the conceptual framework diagrammatically and operationalizing the variables to be used in the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses in detail the methodology adopted in data collection, analysis and presentation of findings in pursuit of the study objectives. The chapter is divided into the following subsections, 3.2 explains the research philosophy, 3.3 explains the population, and 3.4 explains the research sample. 3.5 explains the research design, 3.6 elaborates on the data collection and the research instruments, 3.7 elaborates the data analysis. Research quality and ethical considerations upheld are discussed in subsections 3.8 and 3.9 respectively.

3.2 Research Philosophy

Research philosophy is a belief about gathering analysing and using data about a phenomenon. The purpose of research philosophy is to assess the assumptions that support the adopted research strategy together with the practical experiences, relationship to knowledge and the process through which they have been formed in real life situations Saunders, Lewis, & Thornhill, (2009). A pragmatic research philosophy was adopted in this study. Saunders et al., (2009) indicates that pragmatics recognize that there are various ways of understanding the world and doing research and that no one view can ever give the entire picture as there are many realisms. A concept is only accepted and considered relevant if it supports action in this philosophy. According to this philosophy, the research question forms the basis of any study. More than one research approach and research strategies are integrated in the same study in this philosophy unlike positivist and interpretivist research philosophies.

3.3 Research design

The research design details an outline of how the research will take place. The research employed a concurrent triangulation design where both the qualitative and quantitative data were

collected during the same stage. Likewise, both the secondary and the primary data were collected in one phase, and subsequently analyzed separately and later compared and combined in the discussion of the findings from which the conclusions were drawn. This design was used to overcome the weakness in one research design with the strengths of another. The weakness that proved to be inherent in primary were subdued by the strengths of secondary data and vice versa. In the bid to advocate for this research design, Creswell, (2008) supports this in expanding on quantitative data through a collection of open-ended quantitative data. This design was found to be appropriate for this study because it enabled the researcher to define in a more accurate way, the variables of this study and at the same draw time irrefutable findings and conclusion.

3.4 Target Population

The target population is the entire group of people, events or things that the researcher intends to investigate (Sekaran & Bougie, 2009). In this study, the population comprised of 21 companies quoted at the NSE that issued capital through rights issue and/or corporate debt for a period of 10 years between 2006 to 31st December 2016.It also comprised of 32 matching firms making the total population sample to 53 for objective 1.Objective 2 and 3 have a population of 21 companies and a sample size of 21 companies. At this period, it is when most rights and corporate debt issues took place at the NSE. 21 rights issues and 27 corporate debts were issued at the NSE in the period under review as indicated in Appendix 3.

Table 2.0 Target population

Companies listed on NSE	Period	Size
Issued capital through rights of issue/ corporate debt	2006 to 2016	21 companies
Matched firms	2006 to 2016	32 companies
Total sample size		53 companies

Table 2.1: population and sample size for the specific objectives

objective	population	sample size
1	53	53
2	21	21
3	21	21

3.5 Sample size

A Sample can be defined as the part of the population that helps us to draw conclusions about the population. The 21 companies sample derived for this study through systematic census sampling techniques which employed the following criterion; companies must have been listed/or listed on NSE in the period from 2006 to 2016 to give a sample of 10 years. Examination, the capital issued must have been through rights issue and corporate debt. For primary data the research questionnaire was administered to all the 21 companies that offered rights issue and corporate debt during the period under review. This enabled exploitation of any distinguishing characteristics of companies which offered rights issue and corporate debt and it enabled the selection of a sample size that provided the desired results considering all necessary factors of the population.

3.6 Data collection methods

Data collection refers to the process of gathering and measuring information so as to answer questions that prompted the undertaking of the research. The study utilized both primary and secondary data.

Secondary data gathered for this research included; daily closing share prices and the stock market performance as measured by NSE 20 share index return, inflation rates as measured by monthly CPI index derived from Kenya Bureau of Statistics (KEBS); 10-year constant maturity Treasury bond rates and 91 days treasury bill rates acquired from the Central Bank of Kenya; sales, total assets, MBR of the listed companies and EBITDA obtained from financial reports and listed company's websites. Annual financial reports obtained from CMA and NSE. This

information was sought in the pursuit of achieving the first and second objectives of the study. The challenge realized in obtaining secondary data was incompleteness and lack of authentic data. This challenge was subjugated by sourcing data from more than one recognized sources. In dealing with the lack of authentic data, preference was given to verifiable sources such as capital and money markets and their regulators. In situations where the data could not be found from those credible sources, then the researcher retrieved the data from the specific firm databases and websites.

Primary data was collected through the face to face administration of a questionnaire that contained both open and closed-ended questions. The questionnaire was structured as follows; section 1: General information questions were asked, section 2: Capital structure questions were asked, Section 3: equity market timing questions were asked and finally section 4: debt market timing questions were asked. They were issued to finance managers and directors of the 21 listed companies which made corporate debt and rights issue during the period under review. The data collected included their opinions on market timing and how it influenced and affected their financing decision-making process and the resultant capital structures.

Primary data was utilised exclusively to tackle the third objective of the study. By assessing opinions of finance managers and directors, the data obtained proved useful for this objective because it was acquired from people who held leadership positions and were directly involved in the financial decision-making of the listed firms (Kothari, 2004). However, the primary data has inherent weaknesses which include lack of objectivity and incompleteness of the questionnaires. This challenge has also been indicated by (Kothari, 2004). Any incomplete questionnaire was removed from the sample to enhance completeness.

3.7 Data analysis

Data analysis refers to the systematic application of statistical tools in processing data into meaningful information (Saunders et al., 2009). This study employed, event study methodology, regression analysis and descriptive statistics for both primary and secondary data, where data

was recorded, organized, coded in summary tables and distribution charts in readiness for analysis. The association between independent and dependent variable was measured using a regression analysis. Additionally, the method has been commonly used to assess market timing and capital structure. Secondary data was organized in spreadsheets and SPSS and/or Stata to enable meaningful analysis afterwards this data was presented on frequency tables, graphs, pie charts and histograms for analysis purpose. Data was analysed as follows with reference to the study objectives:

3.7.1 Assessing the Presence of market timing

The aim of the first objective of the study was to investigate the presence of market timing in security issuance decisions by companies listed at the NSE. Prior studies indicated that share price and operating performance of firms that issue securities deteriorated after such issues Spiess & Affleck-Graves, (1995); Loughran & Ritter, (1997) ;McLaughlin et al., (1996) ;Spiess & Affleck-Graves, (1999). The decline in share and operating performance has been attributed to market timing and free cash-flow hypotheses. These often coincide with a run-up of stock prices and operating performance of such firms. The objective was addressed through an analysis of share returns prior and after announcement of the rights issue or corporate debt event. Stock returns of issuing firms were later compared with stock returns of non-issuing listed firms of similar size the process enabled comparison between firms. An event study methodology was utilised to evaluate the stock price response to rights issues and corporate debt issuance announcements.

Fama, Fisher, Jensen, & Roll, (1969) instituted the event study methodology while studying how common stock prices reacted to a stock split. Binder, (1998) argues that event study methodology has been extensively utilised to analyse stock price behaviour around events such as accounting rule changes, earnings announcements, changes in CEO, securities issues announcements and dividend announcements. Event studies mainly test market efficiency in incorporating information received by the market and to analyse the effect such events have on the wealth of a company's shareholders (Binder, 1998).

In event studies, models are utilized to estimate expected returns. These models include; the mean adjusted return, market adjusted return, market model adjusted return, Capital Asset Pricing Model (CAPM) adjusted return and Fama-French three factor models. In conducting event studies an event window and estimation period have to be identified. This is because the effect of the event on a stock price is examined during the event window whereas the expected return of a share is estimated during the estimation period which represents a neutral period prior to the event window.

The study employed market adjusted return model in analysing performance of stocks in listed firms that offered rights issues and corporate debt in the study period. This model employs the market return (R*mt*) as the expected return over the event window period. The benefit in using this model is that in all situations where the model is used no estimation period is needed. The expected return is equal to the market return in the market adjusted return model, since beta (β) is assumed to be 1 and the intercept (α) to be zero in the regression model used to calculate the expected return. The NSE 20 share index was used to calculate the market return because NASI the other alternative was introduced on 25th February 2008 way after the study period considered for this study.

Equation 1.0: Expected Return Rate

$$E(R_{it}) = R_{mt}$$

Where:

E (R*it*) -represents expected return of firm *i* on day *t* during the event window

R*mt*- represents the NSE 20 share index return on day *t* within the event window

The market adjusted return demonstrated that changes that arose in individual stocks value were as a result of the announcement of security issuance; it can be calculated as shown below:

Equation 1.1: Market Adjusted Return

$$AR_{it} = R_{it} - R_{mt}$$

Where:

AR*it* -represents the Market Adjusted Abnormal return of firm *i* on day *t* in the event window

R*it* -represents the return of firm *i* on day *t* within the event window

R*mt* -represents NSE 20 share index return on day *t* within the event window

The steps in conducting an event study include; identify the event to be tested, define the period to be studied in terms of both the event window and event date, estimate the expected returns, calculate the abnormal returns and calculate cumulative abnormal returns, test for the significance of the abnormal returns and finally analyse and interpret the results from the test statistic. These were the steps followed in carrying out the event study methodology in this study. The event window was 60 days; 30 days before and 30 days after the event date (Oler, Harrison, & Allen, 2008). The event date taken was the date the announcement of allotment results of the securities issuance were made to the public for both the rights issue and corporate debt and was taken to be day 0.The duration of the event window was factored in so as to consider any pre-event response since in developing countries information environment nature is such that the market response starts prior to the actual announcements.

3.7.2 Market timing and capital structures of listed firms at the NSE.

The second objective of the study was achieved through examination of the association between market timing and capital structures of listed firms. Panel data regression analysis was utilised to assess the effect of predictor variables on the response variable. Some studies on market timing and capital structure in literature reviewed used panel data regression analysis such as (Bougatef

& Chichti, (2010); De Bie & De Haan, (2007); Bruinshoofd & de Haan, (2012). Panel data comprises of both cross-sectional and time series elements and embodies information across both time and space (Brooks, 2014). The benefits realized in using panel data analysis over pure time series data included: it enhanced the quantity and quality of data and allowed the researcher to isolate influences that are incapable of being spotted using pure time-series analysis. Panel data allowed the researcher to control for variables that were not observable or measured such as varied business practices across firms, social cultural factors as well as variables that varied over time but not across entities. This variables include, change in the national policies, change in federal regulations, and change in international agreements. Panel data accounted for individual heterogeneity and also allowed for multi-level or hierarchical modelling where the variables were included at different levels of an analysis. Some drawbacks of using the panel data consisted of, data collection challenges for instance coverage, sampling design and non-reply in the case of micro panels. These challenges were addressed by using census sampling of all the listed companies that offered corporate debt and rights issue in the period under review. Panel data was applied in the examination of secondary data for quantitative analysis and thus solving non-response in this study.

When handling panel data a researcher can chose from three panel estimator approaches. First, a pooled regression of the data can be done, a fixed effects or the random effects models. When pooled regression is used the pooled estimator assumes α_i to be the same across all cross-section units. The fixed effects model permits the intercept alpha (α_i) in the regression model to vary cross-sectionally but not over time, while all the gradient estimates are static both cross-sectionally and over time. The random effects approach or the error components model proposes different intercept terms for each entity and these intercepts do not vary over time. Under the random effects model, the intercepts for each cross-sectional unit are assumed to arise from a common intercept alpha (α_i) (which is the same for all cross-sectional units and over time) plus a random variable (εi) that varies cross-sections but is constant over time.

To select amongst these 3 approaches a test of homogeneity is computed. The hypothesis of homogeneity of constants across all cross-section units is formulated as follows:

Equation 1.2: Homogeneity of constants

H_0: $\alpha_i = \alpha$

H_1: $\alpha_i \neq \alpha$

Fisher test is computed as follows:

Equation 1.3: Fishers Test

$$F = SS_P - SS_W / SS_W * N(T-1-) - K / (N-1)$$

Where;

SS_P-- Residues square sum of the model Pooled.

SS_W- -Residues square sum of the individual effects model

N-number of firms

K-number of explanatory variables

If calculated *F* is lower than tabulated *F (p-value < 0.05), H0* is rejected and we have to select between the fixed and the random effects model.

With the assumption that the effect is individual, the Hausman specification test is carried out to determine whether the fixed or the random effects model should be adopted. This test compares the fixed and random effects estimates of coefficients. The hypothesis to be tested is concerned with the correlation of individual effects and the explanatory variables as indicated below;

Equation 1.4: Correlation of individual effects and explanatory variables

H_0: cov $(\alpha_i, X_{it}) = 0$

H_1: cov $(\alpha_i, X_{it}) \neq 0$

Under the null hypothesis, the individual effects are random. If the null hypothesis is retained the estimator chosen is Generalized least squares. The alternative hypothesis assumes the individual effects are correlated to the independent variables. If the null hypothesis is rejected, then a model to fix the effects is chosen.

The Hausman test compares the matrix of variance-covariance of 2 estimators:

$H= (\beta_{RE}- \beta_{FE})' [var (\beta_{RE}- \beta_{FE})]^{-1}(\beta_{RE}- \beta_{FE})$

The statistic *H* is asymptotically distributed $\chi 2$ with *K* degree of freedom, where *K* is the number of independent variables. If calculated *H* is lower than tabulated $\chi 2$ (*p-value < 0.05)*, H0 is rejected and individual effects are assumed to be fixed.

The panel data regression models that were estimated are;

Book-Lev i, t = αi.t + β_1MBRi, t +β2PROFITi, t + β3SIZE i, t+ β4PPE I, t+ β5LIQUIDITYi, t+ β6INTERESTi, t+ β7Inflation i, t+ β8YIELD SPREAD i, t+ β9Risk i, t+ β10 Market i, t + εi, t

Market-Lev i, t= αi.t + β1MBRi, t +β2PROFIT i, t+ β3SIZEi, t+ β4PPE i, t+ β5LIQUIDITY i, t+ β6INTERESTi, t + β7Inflation I, t+ β8YIELD SPREAD I, t+ β9 Risk I, t + β10Market i, t + εi, t

Where;

Book-Lev= Book Leverage and is calculated as Book debt/Total assets

Book debt=Total asset less book equity

Book equity=Total assets less total liabilities and preferred stock plus deferred taxes and convertible debt

Market-Lev= Market leverage and is calculated as Book debt/Total assets- book equity + market equity

Market equity=common share outstanding multiplied by price

Market timing = MBR which is calculated by taking the total assets of a firm less the book value of equity then add the market value of equity divided by the total assets of each firm at the end of each fiscal year.

Profit =Profitability is calculated as EBITDA of firm (*i)* in year (*t)* divided by total assets of firm (*i)* at the end of year (*t).*

Market = Market performance is measured by NSE 20 share index returns. Market performance is calculated by measuring the growth on the NSE all share index between year (t-1) and year (t).

Size= Company size is measured by taking a natural logarithm of sales for year t.

PPE=Tangibility of assets which is calculated by dividing Property, Plant, and Equipment by total assets.

Liquidity= calculated as current assets divided by current liabilities.

Interest = the average rate of interest announced by the central bank of Kenya (CBK) for year *t* was considered.

Inflation = is defined as the annual percentage change of the CPI in each monthly observation

Yield spread= measured by the difference between the 10-year constant maturity Treasury bond rates and the 91-day treasury bill rate, which were taken as the proxies for long term and short term interest rates.

Risk= measured as standard deviation of profit, σ (Prof)

αi.t = Constant term.

β1 to β4 =Regression Coefficients.

ε = the error term, which defines the variation in the response variable which cannot be explained by the included predictor variables.

The regression analysis proceeds as in the case of a multiple linear regression using ordinary least squares estimation technique, if pooled regression is confirmed as the appropriate model to use.

To test for statistical significance, the (T) statistic is used. The test of significance is done at the individual company level and then compared for all the companies in the sample. This study uses 5% level of significance which is the accepted conventional level in social sciences research. This level of significance indicates that 95 times out of 100, the researcher will be sure that there exists a true or significant correlation between the two variables, and only a 5% chance that the relationship does not truly exist.

Explanatory power of the control variables was measured by first performing panel data regressions without the control variables with the strength of the predictive power of model being checked using the coefficient of determination, adjusted R^2, and then the control variables were added into the models to establish the joint predictive power of all the determinants of the capital structure using adjusted R^2.

If individual effects are correlated with the independent variables, then a fixed effects model would be chosen. The model estimated under the fixed effects model is;

Equation 1.5: Model estimated under fixed effects

$$Y_{it} = \alpha + \beta x_{it} + \mu_i + \nu_{it}$$

Where;

Y_{it} - Represents the capital structure of a firm

α – Represents intercept term

β is a k*1- Represents the vector of parameters to be estimated on the explanatory variables

x_{it-} is a 1* k- Represents the vector of observations on the explanatory variables, t=1,….T; i=1,….N

μ_i - individual firm specific effects. Represents all of the variables that affect Y_{it} cross-sectionally but are constant over time for instance the industry an entity operates in, the country where the firm has its headquarters, etc.

ν_{it} - Represents the "remainder disturbance" that changes over time and across firms. It captures everything that is unexplained as regards the capital structures.

This model was estimated using dummy variables, hence termed as the least squares dummy variables (LSDV) approach.

Equation 1.6: LSDV Approach

$$Y_{it} = \beta x_{it+} \mu_1 D1_{i+} \mu_2 D2_{i+} \mu_3 D3_{i+\ldots\ldots+} \mu NDNi + \nu_{it}$$

Where

D1i- is a dummy variable that assumes the value of 1 for all observations on the first entity (for example the first company) in the sample and zero otherwise and so on.The intercept α has been eliminated from the equation to avoid the dummy variable trap where a perfect multicollinearity between the dummy variable and the intercept can exist.

In case individual effects are random, then choosing the generalized least squares model estimator becomes inevitable. When GLS is used the data used requires transformation so as to avoid cross-correlations in the error terms. Luckily, this is achieved through use of standard applications such as Stata and Eviews. The transformation involved is to subtract a weighted mean of the Y_{it} overtime (part of the mean rather than the whole mean). Define the "quasi-demeaned" data as $y_{it}^{*} = y_{it} - \bar{y}i$ and $x_{it}^{*} = x_{it} - \bar{x}_i$ where $\bar{y}i$ and $\bar{x}i$ are the means over time of the observations on Y_{it} and x_{it} respectively. Therefore, the model to be estimated would be;

$$Y_{it} - \bar{y}_i = \beta_1 (x_{it} - \bar{x}i) + (\nu it - \bar{\nu}_i)$$

3.7.3 Finance manager's views with regard to market timing

The third objective of this study focused on establishing the stakeholder's view on market timing by the NSE listed companies. To achieve this objective, closed and open-ended questionnaires were personally administered to finance managers /directors of the sampled companies to obtain their views on whether they practiced market timing in their security issuance and to establish the extent to which the presence of market timing influenced their financing decision making and the resultant capital structures. Appendix 2 contains the sample questionnaire whereas Appendix 3 contains the NSE listed companies that raised capital through rights and corporate debt.

3.8 Research quality

This research safeguarded the research quality through scholarly peer review and enhanced by providing sufficient information concerning the major research components of the study; such as population of interest description, sampling techniques explanation, definition of key concepts and variables, descriptive statistics of the main variables and description of the analytic techniques employed. This study responded to the research questions with rigor and scientific manner. Any potential threats to the study's validity were addressed as follows;

3.8.1 Internal Validity

The study sought to explain whether changes in the result could be attributed to other explanations other than those explored in the research. The study objectively explained how alternative explanations were ruled out in arriving at the conclusions drawn from the data analysis.

3.8.2 External Validity

The study explained the possibility of the findings being generalized beyond companies whose place, time and circumstances differed from those of firms that have raised capital through rights issue and corporate debt.

3.8.3 Construct validity

Key concepts of the research were sufficiently measured to enhance the credibility of the study. The measures and methods used have been independently authenticated in previous studies. It sought to establish how effectively the variables used represented the ideological image of the concepts and their manifestation in reality. The constructs used to collect primary data were also tested for consistency of the responses received using the Cronbach's Alpha test results is presented in the table No. 3.0

Table 3.0: Reliability test

Factor	Number of constructs	Cronbach's Alpha	Remarks
Equity Market Timing	7	0.768	Acceptable
Debt market timing	4	0.949	Acceptable

The test results revealed that the reliability coefficient for equity market timing was 0.768; Debt market timing had a coefficient of 0.949.A coefficient of 0.70 and above implies high degree of reliability of the data. Hence all the constructs were found to be reliable.

The research also applied research assessment tools to evaluate the quality of the study. Turnitin an internet-based plagiarism-prevention service was also used to establish originality of the study.

3.9 Ethical considerations

Ethics is paramount when conducting research. All referenced materials were duly cited using the APA referencing style set by the university guidelines to avoid plagiarism. The research was conducted taking care not to harm respondents, whether physically, mentally or emotionally. The information used in the study was gathered from respondents who willingly accepted to participate. Research questionnaires were administered and then collected from firms that were willing to give out the information required. Those companies that did not respond follow up were done via email and if no response was received the company was considered as a non-response. Privacy and confidentiality of the respondents, their organizations and the information they provided was guaranteed and guarded throughout the study. The study did not refer to a specific respondent or company during the writing of this thesis report. Proper authorizations were sought before data was gathered from the respondents and the acquired information used solely for academic purposes. An introduction letter was requested and granted which was delivered to the sampled firms when collecting the data. The information used in this study was collected from respondents

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

The study sought to examine presence of market timing in security issuance decisions by companies listed at the NSE. The chapter presents data analysis results and findings with regard to study objectives. The chapter is structured as follows: 4.2 presents general information about the secondary and primary data used; 4.3 covers the first objective of the study, investigation of presence of market timing by security issuing firms; 4.4 discusses the second objective of the study, the association between market timing and capital structures observed in listed companies; 4.5 findings of the finance managers view with regard to market timing and 4.6 presents the chapter summary.

4.2 Presence of Market Timing

The first objective of the study sought to investigate presence of market timing in securities issuance by firms listed at the NSE. This objective was achieved through an events study methodology aimed at establishing the announcement effect of securities issuance by the listed firms at the NSE.

Prior findings of research on market timing indicate performance of stock prices of market timing firms issuing securities deteriorate after such issues Ritter, (1991);Spiess & Affleck-Graves, (1999);Loughran & Ritter, (1995);Spiess & Affleck-Graves, (1995). The study sought to establish whether securities issuing firms in the NSE do market timing on corporate debt and rights issues and as a result their stock prices performance should deteriorate after such issuance. This was achieved through a comparison of CAR of issuing to non-issuing firms of similar size and running a Kruskal Wallis test to test for the significance of the CAR prior and post announcement of securities issuance. The aim was to establish differences if any, in returns before and after the announcement of issuance of corporate debt and rights issues and whether

such declaration had any impact on stock prices of issuing firms. Two measures were calculated for each company, AR and CAR.

4.2.4 Rights issue analysis

For the rights issuing firms both the CAR returns before and after the issue were calculated and considered as the basis of analysing the general effect on share prices. The comparison between the 30 days prior CAR, the date of announcement and 30 days post the announcement are presented in appendix VII.

From the comparison made for post CAR 9 out of the 12 rights issuing firms under analysis underperformed their non-issuing firms matched by size. This means that the stock prices of the rights issuing companies declined by a higher amount or increased by a smaller margin than their matching firms after the rights issue announcement. The study concluded that rights issuing firms underperformed size matched firms, a result in agreement with reviewed literature where securities offering companies shares, underperformed their non-issuing counterparts of similar size, Spiess & Affleck-Graves, (1995). Spiess & Affleck-Graves, (1995) established SEO firms median return was 10% in the 5-year period post issue compared to a median 5 year holding return of 42.3% for similar size, non-issuing companies in same industry. Deterioration of performance was similarly observed when companies were matched on the basis of MBR and size rather than sector and size classification.

These findings concur with Loughran & Ritter, (1995) who established underperformance for both IPO and SEO companies when compared to firms which did not issue during the 5 years post issue. Loughran & Ritter, (1995) findings reveal the average annual return during the 5 years post issuing is 5% and 7% for companies conducting IPOs and SEOs respectively. The abnormal returns were then subjected to tests of significance.

To test for significance of abnormal returns the Kruskal Wallis test was utilised which is a rank-based nonparametric test. It was performed to demonstrate existence of any statistically significant differences between CAR in each set of matching firms. To choose between

parametric or non-parametric test, the rights issue data was subjected to tests of normality and homogeneity of variance.

Normality test results revealed that data was not normally distributed justifying use of non-parametric tests to test for significance. Levene's test was applied to test for homogeneity of variance. Levene's test results indicated a statistically significant variance between the means, which indicates that group variances are unequal in the population. This indicated a violation of the homogeneity of variance test further affirming the use of non-parametric tests to test for significance.

Kruskal Wallis test results presented in appendix IV established that all categories of companies recorded statistically significant variance in both pre CAR and post CAR all with P_values of 0.000.Therefore it can be concluded that the variance in the means of CAR before and after the rights issuance were probable due to rights issuance announcements. Hence, rights issuance announcements had a material impact on stock prices.This means that the securities issuance announcements acted as signals which affected the share prices of the rights issuing firms.This is as a result of statistically significant variance in the means before and after the rights issue announcement which indicated that the announcement had information content which determined the share prices.

4.2.5 Corporate Debt abnormal returns analysis

After the abnormal returns were calculated, the CAR 30 days before the corporate debt issuance, the announcement day CAR and the CAR 30 days after the announcement date were compared to establish whether corporate debt issuers under or over performed non-issuing firms matched by size. Appendix VIII presents comparison test results. This comparison reveals that corporate debt issuers outperformed non-issuing firms matched by size in post CAR. 8 out of 11 corporate debt issuers underperformed their non-issuing counterparts matched by size in post CAR meaning that their stock had a lower increase in share price or a higher decline in share price than the matching firms before the corporate debt issuance announcement. Therefore, the study concluded that corporate debt issuing firms recorded deterioration in post CAR after making the

corporate debt issuance as shown in the test results presented in Appendix VIII. This outcome concurs with findings from Spiess & Affleck-Graves, (1999) in their study on long-run performance of share returns following debt issue in US market. Spiess & Affleck-Graves, (1999) confirmed that for straight debt issuers, median sample company performs poorly than a similar size and MBR matched firm by almost 19% in the 5 years after debt issue while for issuers of convertible debt the median company underperformed its matched counterpart by nearly 20% in the 5 years after offering the convertible debt.

The cumulative abnormal returns were then subjected to tests of significance. Test of significance are grouped into parametric and non-parametric tests. Parametric tests make some assumptions which must be met before the decisions to use them are made. The most critical of those assumptions is that the data must be normally distributed and also it does not violate the homogeneity of variance.

Normality test results revealed that data was not distributed normally hence non-parametric tests were applied to significance testing. Homogeneity of variance test also indicated that the group means were unequal in the population hence affirming the use of non-parametric tests for significance testing. To test for significance, Kruskal Wallis test was applied and test outcomes are presented in appendix V which revealed that all categories of companies recorded statistically significant difference in pre and post CAR as shown by their p-values which are less than 0.05 except for the category with the pair of companies 53 and 54 which had a test statistic of $\chi 2$ (2) = 1.213, p=0.271 for pre CAR and $\chi 2$ (2) = 0.332, p=0.564 for post CAR hence statistically insignificant.

Therefore it can be concluded that the variance in the means of CAR pre and post the corporate debt issuance were likely due to the corporate debt issuance announcements . Hence, the corporate debt announcements had a substantial impact on the share prices,meaning that the securities issuance announcements acted as signals which affected stock prices of corporate debt issuing firms.

4.2.6 Conclusion on the first objective of the study

This objective looked at the cumulative abnormal returns for corporate debt and rights issuing firms for the period between the years 2006 to 2016.Test results from the study indicated that both the corporate debt and rights issuing firms underperformed their non-issuing size matched firms. A finding confirms market timing presence in issuance of both securities which concurs with Spiess & Affleck-Graves, (1995) whose findings indicated that SEO firms post-offering performance was comparable to that of IPOs offering firms. The study findings are in conformity with Loughran & Ritter, (1995) who established underperformance for both IPO and SEO firms compared to non-issuing companies for 5 years following the issue date. Findings from this study reveal that IPO and SEO firms average annual return during the 5 years following an issue were 5% and 7% respectively.

Spiess & Affleck-Graves, (1999) confirmed underperformance of stocks in firms issuing debt. Results from this study indicated that straight debt issuers median sample company underperformed a similar size and MBR matched company by nearly 19% in the 5 years post the debt issue while issuers of convertible debt underperformed its matched counterpart by nearly 20% in the 5 years post convertible debt issue.

4.3 Relationship between Market Timing and Capital Structure

The study's second objective sought to establish whether there existed a relationship between market timing and capital structure for listed companies at the NSE. This was achieved through panel data analysis. In panel data analysis behaviours of entities are observed over time. Variables that cannot be measured or observed for instance cultural factors, business practice difference or those that vary over period of time but not across entities are controlled by use of Panel data as it accounts for individual heterogeneity. The study utilised GLS as opposed to OLS which allows for presence of cross-sectional correlation ,autocorrelation within panels and heteroscedasticity across panels.

The data was unbalanced which refers to the fact that different companies make corporate debt and rights issues in different time periods and hence the data required for analysis differed from one company to another resulting in the unbalanced panel data. However, this did not limit the analysis as one can still run the model.

4.3.1 Rights issue analysis

4.3.1.1 Descriptive statistics

Descriptive statistics of variables under the study are tabulated in Table 4.0. These include mean, standard deviation, minimum, maximum and the number of observations.

Table 4.0: Descriptive Statistics-rights issues

Variable	Mean	Std. Dev	Min	Max	N
Book Leverage	0.7214	0.2411	0.2406	1.3962	85
Market Leverage	0.7462	0.1613	0.2285	0.9789	85
MBR	0.9630	0.2463	0.3592	1.6077	85
Profitability	0.0444	0.0656	(0.3292)	0.3127	85
Risk	0.0281	0.0417	0.0046	0.1790	85
Inflation	7.9188	3.2412	4.1000	15.1000	85
Yield spread	3.5825	2.6613	(1.6340)	7.9810	85
Company Size	22.9969	1.4471	20.0313	25.4782	85
PPE	0.2205	0.2917	0.0062	0.8739	85
Liquidity	0.9708	0.4651	0.2600	2.7991	85
Market	(0.0113)	0.2388	(0.3533)	0.4210	85
Company growth	0.9630	0.2463	0.3592	1.6077	85
Interest rate	11.1505	5.2477	1.1800	19.7300	85

The table shows that there were 85 observations for each of the variables.

4.3.1.2 Test for stationarity

Stationarity is a qualitative process in which the statistical parameters including mean and standard deviation do not vary over time. The key property of a stationary process is that the auto-correlation function relies on one lag alone and does not vary with time at which the

function was calculated. Fisher-type unit-root test based on ADF was used to test for stationarity since the panels were unbalanced. The number of panels analysed were 9.

Stationarity test results in appendix VI showed that the panel for profitability, inflation, company size, liquidity, market, company growth and interest rates were stationary whereas the panels for the other variables were found to contain unit roots and hence not stationary.

4.3.1.3 Test for Multicollinearity

Multicollinearity is tested to establish whether any linear relationship exists among the explanatory variables. Pearson's correlation coefficient matrix was used to test for multicollinearity between the independent variables.

A correlation matrix is considered as a simple technique of detecting collinearity among the independent variables. The presence of high correlation is indicated by values that are greater than 0.9 (Gujarati & Porter, 2010). The table 4.1 shows the correlation coefficients are less than 0.9 except for company growth which has a correlation coefficient of 1.000 with MBR. Hence company growth was eliminated from the analysis of book leverage for rights issue. All other independent variables were not correlated.

Table 4.1: Correlation matrix for book leverage –rights issue

Right issue- book leverage													
		BOOK LEV	MBR	PROF	RISK	Inflation	Yield spread	Co. size	PPE	liquidity	Market	Co. growth	interest rates
Book LEV	Pearson Correlation	1											
MBR	Pearson Correlation	.780**	1										
PROF	Pearson Correlation	-.450**	-.374**	1									
RISk	Pearson Correlation	-.324**	-.250*	-.380**	1								
Inflation	Pearson Correlation	-0.008	-0.048	0.129	-0.064	1							
Yield spread	Pearson Correlation	0.053	0.127	0.006	0.02	-.318**	1						
Company size	Pearson Correlation	.449**	.293**	-0.043	-.378**	-0.149	-0.152	1					
PPE	Pearson Correlation	-.533**	-.506**	0.188	.251*	-0.088	-0.026	.248*	1				
Liquidity	Pearson Correlation	-.661**	-.599**	.352**	.299**	0.05	0.021	-.558**	.221*	1			
Market	Pearson Correlation	-0.055	0.048	0.03	-0.086	-.487**	-0.167	0.019	0.013	-0.026	1		
Company growth	Pearson Correlation	.780**	1.000**	-.374**	-.250*	-0.048	0.127	.293**	-.506**	-.599**	0.048	1	
interest rates	Pearson Correlation	-.544**	-.528**	0.045	.513**	0.036	-.465**	0.019	.715**	.333**	-0.001	-.528**	1
**. Correlation is significant at the 0.01 level (2-tailed).													
*. Correlation is significant at the 0.05 level (2-tailed).													

Test results as shown in table 4.2 indicate high correlation between company growth and MBR with a correlation co-efficient of 1.000. Hence Company growth was eliminated from the analysis of market leverage for rights issue. All other independent variable had correlation coefficients of less than 0.9.

Table 4.2: correlation matrix for market leverage-rights issue

Market Leverage-rights issue													
		market lev.	MBR	Prof	Risk	Inflation	yield sprea	Co.size	PPE	liquidity	Market	Co. growth	interest rate
Market Lev	Pearson Correlation	1											
MBR	Pearson Correlation	0.071	1										
Prof	Pearson Correlation	-.245*	-.374**	1									
Risk	Pearson Correlation	-.237*	-.250*	-.380**	1								
Inflation	Pearson Correlation	0.026	-0.048	0.129	-0.064	1							
yield spread	Pearson Correlation	-0.051	0.127	0.006	0.02	-.318**	1						
Co. size	Pearson Correlation	.377**	.293**	-0.043	-.378**	-0.149	-0.152	1					
PPE	Pearson Correlation	-.267*	-.506**	0.188	.251*	-0.088	-0.026	.248*	1				
liquidity	Pearson Correlation	-.290**	-.599**	.352**	.299**	0.05	0.021	-.558**	.221*	1			
Market	Pearson Correlation	-0.113	0.048	0.03	-0.086	-.487**	-0.167	0.019	0.013	-0.026	1		
Co. growth	Pearson Correlation	0.071	1.000**	-.374**	-.250*	-0.048	0.127	.293**	-.506**	-.599**	0.048	1	
interest rate	Pearson Correlation	-.256*	-.528**	0.045	.513**	0.036	-.465**	0.019	.715**	.333**	-0.001	-.528**	1
*. Correlation is significant at the 0.05 level (2-tailed).													
**. Correlation is significant at the 0.01 level (2-tailed).													

Test results in table 4.3 reveal that only company growth and MBR are highly correlated hence company growth was eliminated from the analysis. All the other variables had correlation coefficients of less than 0.9.

Table 4.3: correlation matrix for book leverage and corporate debt issues

Book leverage-corporate debt issues													
		Book lev	MBR	Prof	Risk	Inflation	yield sprea	Co.size	PPE	Liquidity	market	Co. growth	interest rates
Book Lev	Pearson Correlation	1											
MBR	Pearson Correlation	0.073	1										
Prof	Pearson Correlation	-.313**	.779**	1									
Risk	Pearson Correlation	-.768**	0.222	.581**	1								
Inflation	Pearson Correlation	-0.072	-0.138	0.063	0.076	1							
yield sprea	Pearson Correlation	0.03	0.074	0.05	0.002	-.335**	1						
Co.size	Pearson Correlation	.287*	.701**	.652**	0.1	-0.085	0.041	1					
PPE	Pearson Correlation	-.471**	.309**	.550**	.463**	0.051	0.016	.413**	1				
Liquidity	Pearson Correlation	-.554**	-.340**	-0.161	.281*	-0.06	0.14	-.459**	0.168	1			
Market	Pearson Correlation	-0.092	-0.104	-0.06	0.03	-.404**	-0.156	-0.157	0.011	0.054	1		
Co. growth	Pearson Correlation	0.073	1.000**	.779**	0.222	-0.138	0.074	.701**	.309**	-.340**	-0.104	1	
interest rat	Pearson Correlation	-.648**	0.129	.364**	.540**	0.097	-.424**	0.065	.555**	.297*	-0.005	0.129	1
**. Correlation is significant at the 0.01 level (2-tailed).													
*. Correlation is significant at the 0.05 level (2-tailed).													

From test outcomes presented in table 4.4 above, once more company growth is highly correlated with MBR and hence company growth was omitted from the analysis. All the other variables had correlation coefficients of less than 0.9.

Table 4.4: Correlation matrix for market leverage-corporate debt issues

market leverage-corporate debt issues													
		market lev.	MBR	Prof	Risk	inflation	yield sprea	Co. size	PPE	liquidity	market	Co. growth	interest rates
Market lev.	Pearson Correlation	1											
MBR	Pearson Correlation	-.430**	1										
Prof	Pearson Correlation	-.637**	.779**	1									
Risk	Pearson Correlation	-.797**	0.222	.581**	1								
Inflation	Pearson Correlation	0.013	-0.138	0.063	0.076	1							
yield spread	Pearson Correlation	0.002	0.074	0.05	0.002	-.335**	1						
Co. size	Pearson Correlation	-0.067	.701**	.652**	0.1	-0.085	0.041	1					
PPE	Pearson Correlation	-.436**	.309**	.550**	.463**	0.051	0.016	.413**	1				
Liquidity	Pearson Correlation	-.339**	-.340**	-0.161	.281*	-0.06	0.14	-.459**	0.168	1			
Market	Pearson Correlation	-0.068	-0.104	-0.06	0.03	-.404**	-0.156	-0.157	0.011	0.054	1		
Co. growth	Pearson Correlation	-.430**	1.000**	.779**	0.222	-0.138	0.074	.701**	.309**	-.340**	-0.104	1	
interest rates	Pearson Correlation	-.590**	0.129	.364**	.540**	0.097	-.424**	0.065	.555**	.297*	-0.005	0.129	1
**. Correlation is significant at the 0.01 level (2-tailed).													
*. Correlation is significant at the 0.05 level (2-tailed).													

4.3.1.4 Panel Regression with Book Leverage and MBR

To carry out the panel data analysis, the first step involved performing the three models. Then Hausman test were performed to confirm the most appropriate model. When book leverage and MBR were used as response and predictor variable respectively, Hausman test indicated that Random effect model was the most appropriate model and was therefore utilized for the analysis.

4.3.1.5 Random effect with book leverage and MBR

When applying random effect model, deviations across firms are believed to be haphazard and without any relationship with independent variables unlike fixed effects model. This model is used when variations across firms are believed to influence the response variable. Table 4.5 presents outcomes of Random-effects GLS regression.

Table 4.5: Random-effects GLS regression with Book Leverage and MBR

R-sq: within = 0.2436					Number of obs = 85	
between = 0.5426					Number of groups = 13	
overall = 0.6088					Obs per group: min = 1.0	
					Avg = 6.5	
					Max = 11	
					Wald chi2(1) = 33.32	
corr(u_i, Xb) = 0 (assumed)					Prob > chi2 = 0.0000	
Book Leverage	Coef	Std. Err.	z	p>|t|	95% CI	
					lower	Upper
MBR	0.4188705	0.07257	5.77	0.000	0.001	0.5611019
_Cons	0.2985892	0.08376	3.56	0.000	0.1344168	0.4627616
sigma_u	0.15705667					
sigma_e	0.08892389					
rho	.75724822	(fraction of variance due to u_i)				

In reference to outcome in table 4.5, coefficient of determination values (R^2s) within, between and the overall were established to be 24.36%, 54.26% and 60.88% respectively. The coefficient of determination (R^2) generally shows the change of response variable explained by change in predictor variable. MBR coefficient was established as statistically significant with a p-value of 0.000. MBR had a positive correlation with book leverage. The study thus concluded that MBR ,the proxy for market timing statistically and significantly influenced book leverage. A result consistent with Bougatef & Chichti, (2010)whose findings indicate that MBR positively influenced equity issues. Test results suggest listed firms tendency to raise external equity when they are highly valued by the market. Managers in these companies recognize that their stocks are highly valued and as a result try to take advantage of these overvaluations. This evidence concurs with Alti, (2006);Baker & Wurgler, (2002); Graham & Harvey, (2001) arguments whereby companies exploit opportunities for financing and float securities on noticing that their securities are highly priced by the market. The result contradicts a study by Mahajan & Tartaroglu, (2008) who established a negative correlation for G-7 countries although this relationship could not be attributed to equity market timing.

4.3.1.6 Panel Regression with Book Leverage, MBR and Control Variables

In this section, a panel regression model is fitted with Book leverage as response variable, MBR as explanatory variable and Control variables namely: Profitability, Risk, Inflation, Yield Spread, company size, PPE, Liquidity, Market, Company growth and Interest rate. Fixed and random effects model were fitted, with the best model being chosen. Hausman test confirmed random effect model as the most appropriate model and was therefore adopted.

4.3.1.7 Random Effects model with Book Leverage, MBR and Control Variables

Table 4.6 shows test results for the Random-effects GLS regression.

Table 4.6: Random Effects model with Book Leverage, MBR and Control Variables

R-sq: within = 0.4211					Number of obs = 83	
between = 0.8787					Number of groups=11	
overall = 0.8169					Obs per group:	
					min = 3	
					Avg =8.8	
					Max = 7.5	
					Wald chi2(10) = 321.23	
corr(u_i, X) = 0 (assumed)					Prob > chi2 = 0..000	
Book Leverage	Coef	Std. Err.	z	p>|t|	95% CI	
					lower	Upper
MBR	0.3298	0.0817	4.04	0.000	0.1696	0.4900
PROFITABILITY	-0.9797	0.2545	-3.81	0.000	-.1.4696	0.4719
RISK	-0.6843	0.5123	-1.34	0.000	-1.4696	0.01744
INFLATION	0.0066	.0055.	1.99	0.233	-0.0042	.0315.
YIELDSPREAD	0.0134	0.0092	0.0092	1.450	0.148	0.0315
COMPANYSIZE	0.068	0.0141	4.8	0.000	0.0402	0.0959
PPE	-0.3589	0.0951	-3.77	0.000	-0.5455	0.1723
LIQUIDITY	-0.0168	0.04	-0.42	0.673	-0.0953	0.0615
MARKET	-0.0178	0.0701	-0.25	0.800	-0.1552	0.1196
COMPANYGROWTH	0	0mitted				
INTERESTRATE	0.0044	0.0068	0.65	0.517	-0.009	0.0179
_Cons	-1.1516	0.3713	-3.1	0.002	-1.8794	0.4238
sigma_u	0					
sigma_e	0.6882					
rho	0 (fraction of variance due to u_i)					

From test results in table 4.6, the coefficients of determination values (R2s) were within, 42.11%, between, 87.87% and overall the model was found to explain 81.69% of the variances in book leverage. Further the findings showed that MBR, profitability, risk, company size and PPE significantly influenced Book leverage as indicated by significant p-values of 0.000 for the variables. The other variables were found to be insignificant as their p-values were greater than 0.05. Profitability, Risk, PPE, liquidity and market negatively impact on book leverage whereas MBR, inflation, yield spread, company size and interest rates had positive impact on book leverage.

MBR and book leverage were established to exhibit a positive association demonstrating that MBR positively influences equity offerings. A finding consistent with Bougatef & Chichti, (2010) whose findings indicate that MBR positively impacted equity issues. These results suggest companies are inclined to source external equity when they highly valued by the market. Managers in these companies notice that their stocks are highly priced by the market and as a result try to exploit these overvaluations. This finding concurs with Alti, (2006);Baker & Wurgler, (2002); Graham & Harvey, (2001) who assert companies will exploit opening windows for financing and offer securities when they recognize their securities to be highly valued by the market. A result which contradicts the study by Mahajan & Tartaroglu, (2008) who established a negative correlation for G-7 countries which could not be ascribed to equity market timing.

Profitability is negatively correlated with book leverage, a result that concurs with pecking order prediction, Myers & Majluf, (1984) that lucrative companies have lower leverage ratios as they choose to fund their investments internally. A negative association is established between risk and book leverage as the study anticipated since the riskier a company is the lower would be its leverage levels. Tangibility is negatively correlated with book leverage implying that as level of tangible assets in a company grows the higher would be its collateral value making it easier for companies to borrow from the market than their counterparts with lower leverage. Liquidity was negatively correlated with book leverage meaning higher liquidity levels in a firm would result in lower the leverage levels which concurs with pecking order theory by Myers, (1984) hypotheses that company's will use internally generated finances before turning to other sources of funds.

Market which is a proxy for market performance has a negative sign indicating stock market performance will stimulate equity issuance driving equity levels up and leverage levels down hence the negative association between market and book leverage. Findings concur with windows of opportunity theory by Lucas & McDonald, (1990) who posit abnormal positive stock returns and an abnormal rise in the market precede equity issuances. Inflation positively influences book leverage. If inflation levels are high investors will have less disposable income therefore will not invest in a company's shares making companies to turn to debt financing, supporting the market timing proposition that companies will turn to the most favourable source of financing. Yield spread influences the decision for firms to offer debt and hence the direct impact on leverage levels in a firm.

Large firms have a higher propensity, capacity and ability to use debt in their capital structure hence positive relationship between company size and book leverage. Interest rates are positively correlated with book leverage. This means that if interest rates have been rising or are expected to rise companies will issue more debt now hence increasing, their leverage levels. This evidence shows that firms will raise capital now to avoid future unfavourable market conditions.

4.4 Panel Regression with Market Leverage and MBR

In this section, a panel regression model was fitted with market leverage and MBR as the response variable and the predictor variable respectively. Pooled OLS, fixed and random effects models were fitted from which the best model was selected. The Hausman test confirmed the fixed effect model as the appropriate model and hence embraced.

4.4. 1 Fixed Effects model with Market Leverage and MBR

Table 4.7 presents the fixed effects model results which indicated that the coefficient of determination values (R^2s) were within 28.25%, between, 0.11% and the overall 0.51% of the changes in market leverage were found to be influenced by MBR. The ANOVA indicated the model was statistically significant with a p-value of 0.000. MBR was found statistically significantly negatively influence market leverage, a finding concurring with findings of Baker

& Wurgler, (2002) who established that leverage had a strong negative correlation with their measure of historical market valuations. It conforms with the findings of Alti, (2006) who established that market timing influences the funding activities of companies which results in short term variations from leverage targets. Further agreement with findings are established in a study by Moyo, (2016) who confirmed a significant negative correlation between leverage and MBR which the study argued confirms validity of market timing theory.

Table 4.7: Fixed Effects model with Market Leverage and MBR

R-sq: within = 0.2825					Number of obs = 85	
between = 0.0011					Number of groups = 13	
overall = 0.0051					Obs per group: min = 1	
					Avg = 6.5	
					Max = 11	
					F(1,71) = 27.96	
corr(u_i, Xb) = 0.6038					Prob > F = 0.0000	
Market Leverage	Coef	Std. Err.	t	p>|t|	95% CI	
					lower	Upper
MBR	-0.387388	0.073262	-5.29	0.000	0.5334682	0.2413082
_Cons	1.119279	0.071137	15.73	0.000	0.977436	1.261122
sigma_u	18343345					
sigma_e	0.0840002					
rho	.82664951	fraction of variance due to u_i)				
F test that all u_i=0:		F(12, 71)= 19.76			Prob > F = 0.0000	

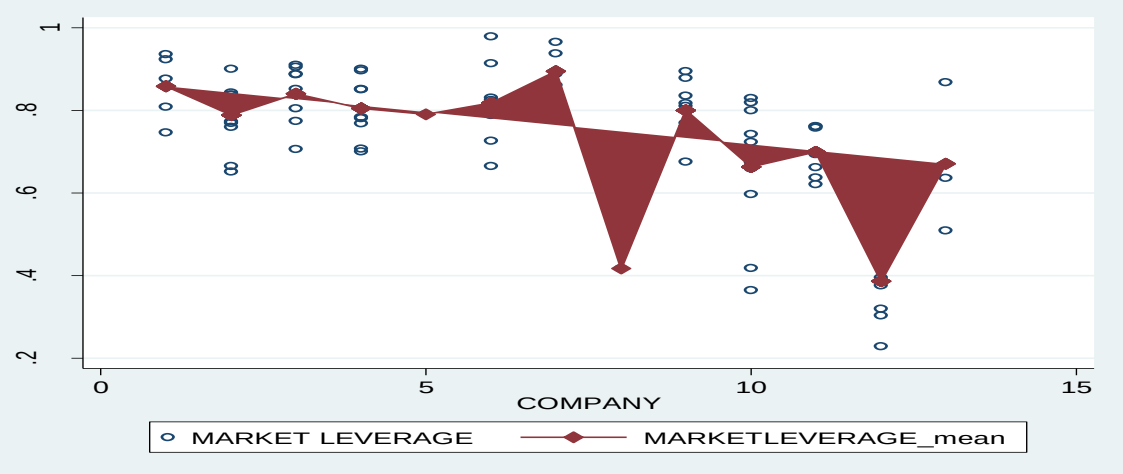


Figure 2.0: Fixed effects: Heterogeneity across the Companies

Figure 2.0 shows heterogeneity in Market leverage across the different companies.

4.4.2 Panel Regression with Market Leverage, MBR and Control Variables

A panel regression model was fitted with Market leverage as response variable, MBR as independent variable and control variables namely: Profitability, risk, inflation, yield spread, company size, PPE, liquidity, market, company growth and interest rate. Random and fixed effects models were fitted from which the best model was chosen. This was done using Hausman test which confirmed the random effect was the most appropriate model.

The test results of Random-effects GLS regression are shown table 4.8.

Table 4.8: Random Effects model with Market Leverage, MBR and Control Variables

R-sq: within = 0.4372					Number of obs = 83	
between = 0.6314					Number of groups =11	
overall = 0.5070					Obs per group:	
					min = 3	
					Avg = 7.5	
					Max = 11	
					Wald chi2(10)= 74.05	
corr(u_i, X) = 0 (assumed)					Prob> chi2 = 0.0000	
Market Leverage	Coef	Std. Err.	z	p>|t|	95% CI	
					lower	Upper
MBR	-0.4154	0.0887	-4.68	0.000	-0.5893	0.2416
PROFITABILITY	-1.0204	0.2762	-3.69	0.000	-1.5618	0.4789
RISK	-0.5877	0.556	-1.06	0.291	-1.6775	5022
INFLATION	0.0087	0.006	1.46	0.143	-0.0029	0.0205
YIELDSPREAD	0.0157	0.01	1.57	0.117	-0.0039	0.0355
COMPANYSIZE	0.0854	154	5.55	0.000	0.0552	0.1156
PPE	-0.4145	0.1033	-4.01	0.000	-0.617	0.212
LIQUIDITY	0.0249	0.0434	0.57	0.567	-0.06027	0.11
MARKET	0.02475	0.0761	0.33	0.745	-0.1244	0.11
COMPANYGROWTH	0					
INTERESTRATE	0.0038	0.0074	0.51	0,608	-0.0108	0.1739
_Cons	-0.8571	0.40307	-2.13	0.033	-1.6471	0.18517
sigma_u	0					
sigma_e	0.0605					
rho	0 (fraction of variance due to u_i)					

Test results presented in Table 4.8 show that coefficient of determination values (R^2s) were within 43.72%, between,63.14% and overall were the model was found to explain50.70% of the variations in market leverage. The test results further indicated that MBR, profitability, company size and PPE statistically and significantly influenced market leverage as indicated by significant p-values of 0.000 for each of the variables respectively. MBR, profitability, risk and PPE were negatively correlated with market leverage whereas inflation, yield spread, company size, liquidity, market and interest rates had a positive association with market leverage. MBR was found to be statistically significantly negatively correlated with market leverage, concurring with findings of a study by Moyo, (2016) who established that MBR was significantly negatively correlated with leverage. A result found to validate market timing theory. It conforms with Baker

& Wurgler, (2002) study on market timing and capital structure where their historical market valuations measure ,MBR was found to be strongly negatively related to leverage. The results agrees with results of Setyawan, (2015) who established MBR had a negative effect on market leverage.

Profitability was found to statistically significantly negatively relate with market leverage. A finding which supports the pecking order theory, Myers & Majluf, (1984) prediction that lucrative companies leverage ratios are lower since they fund their investments from within. Risk was negatively related with market leverage. Risky firms have a higher risk premium attached to their stock prices by the market which makes their shares unaffordable to investors. As a result, these firms are unable to raise funds required for investments through equity offering since conditions in the market are unfavourable. This is consistent with market timing theory in which corporate executives maintain their ability to time the markets when conditions existing these market allow (Baker & Wurgler, 2002). Market leverage and PPE are negatively related. High tangible asset levels allow firms to fund their investments with debt hence the negative association between PPE and market leverage.

A positive relationship exists between market leverage and inflation. Increases in inflation make purchasing power to decline. Due to inflation, share prices decline making the shares appealing to investors creating favourable market condition for companies to offer equity hence the increase in leverage ratios of listed companies. A result that conforms with market timing theory Baker & Wurgler, (2002) who asserts companies should offer equity or debt if conditions existing in the market are favourable.

Yield spread is positively related with market leverage. When yield spread is quite high firms would prefer to offer equity than debt to fund their investments until debt market conditions becomes favourable. The practice of market timing is established where managers of listed firms look at the over or under valuation of their securities when making their financing decisions.

Company size and market leverage are positively correlated. Companies that are large owing to agency costs which are lower, cash flows that are less volatile and ease of access to capital markets embrace more debt.

Liquidity is statistically insignificantly positively related to market leverage. Highly liquid firms would utilise the funds in their custody before they can utilise external funding except in circumstances where managers exploit opening financing windows and issue equity. This finding confirms managers exploiting timing opportunities in the equity market.

Market leverage and market have a positive relation. If performance of the capital market or conditions existing in the market are favourable firms will respond by issuing more equity supporting market timing hypotheses. Doukas et al., (2011) established that when capital markets were perceived as conducive an indicator of market timing and equity adverse selection costs were important considerations that influenced certain companies to offer more debt in hot than in cold-debt market periods.

A positive relationship was established between interest rates and market leverage meaning that interest rates that are rising or anticipated to rise compel companies to issue more debt now aimed at circumventing unfavourable debt market conditions, a finding that concurs with market timing theory.

4.5 Analysis of Corporate Debt

4.5.1 Descriptive statistics – corporate debt

Table 4.9 presents descriptive statistics of study variables. These include mean, standard deviation, minimum, maximum and number of observations.

Table 4.9: Descriptive Statistics-corporate debt

Variable	Mean	Std. Dev	Min	Max	N
Book Leverage	0.6033	0.2907	0.0475	1.0134	71
Market Leverage	0.5841	0.2940	0.0608	‘9831065	71
MBR	1.2466	1.0007	0.2799	5.0291	71
Profitability	0.1003	0.1133	0.0188	0.4536	71
Risk	0.0324	0.0311	0.0030	0.0904	71
Inflation	7.6338	2.8902	4.1000	15.1000	71
Yield spread	3.5742	2.5582	-1.6340	-1.6340	71
Company Size	23.2872	1.1801	20.9641	25.9998	71
PPE	0.2516	0.3213	0.0020	0.9023	71
Liquidity	1.3252	1.0200	0.4650	5.1900	71
Market	-0.0241	0.2224	-0.3533	0.3650	71
Company growth	1.2466	1.0007	0.2799	5.0291	71
Interest rate	12.4390	5.0416	1.1800	19.7300	71

The table shows that there were 71 observations for each variable.

4.5.2: Stationarity Test

Stationarity test was performed using the Fisher-type unit-root test based on ADF tests. Test outcomes indicated that MBR, profitability, inflation, PPE, liquidity, market, company growth and interest rate panels were stationary. The other variables panels were found to contain unit roots and hence not stationary. This test results can be found in appendix VI.

4.5.3: Panel Regression with Book Leverage and MBR

Random effects, fixed effects and pooled OLS models were run on the data. Hausman test confirmed random effect model to be the most suitable model to run the regression analysis.

4.5.4. Random Effects with Book Leverage and MBR

Table 4.10 presents random effect model test outcomes.

Table 4.10: Random-effects GLS regression with Book Leverage and MBR

R-sq: within = 0.0111					Number of obs = 71	
between = 0.0156					Number of groups = 12	
overall = 0.0054					Obs per group:	
					Min = 2.0	
					Avg = 5.9	
					Max = 10	
					Wald chi2(1) = 0.44	
corr(u_i, Xb) = 0 (assumed)					Prob > chi2 = 0.5072	
Book Leverage	Coef	Std. Err.	z	p>|t|	95% CI	
					lower	Upper
MBR	-0.0137261	0.0206971	-0.66	0.507	-0.0542917	0.0268395
_Cons	0.6639834	0.0824126	8.06	0.000	0.5024578	0.8255091
sigma_u	0.26494187					
sigma_e	0.08561666					
rho	.90544639	(fraction of variance due to u_i)				

Table 4.10 results indicate coefficient of determination values (R^2s) were within 1.11%, between, 1.56% and overall the model was found to explain 0.54% of the variations in the book leverage. The coefficient for MBR was found to be statistically insignificant as it had a p-value of 0.507. Therefore, MBR insignificantly negatively influences book leverage. A test result that contradicts Baker & Wurgler,(2002) findings that their measure of historical market valuation, MBR was strongly negatively related to leverage and Moyo,(2016) who established a significant negative correlation between leverage and MBR which was interpreted as a confirmation of market timing.

4.5.5 Panel Regression with Book Leverage, MBR and Control Variables

In this section, a panel regression model was fitted with Book leverage as response variable, MBR as predictor variable and control variables namely: Profitability, Risk, Inflation, Yield Spread, company size, PPE, Liquidity, Market, Company growth and Interest rate. Random and fixed effects models were fitted to the data from which the best model was chosen. Hausman test confirmed random effect model was most suitable to use and was therefore adopted.

4.5.6 Random Effects model with Book Leverage, MBR and Control Variables

Table 4.11 shows test results for Random-effects GLS regression.

Table 4.11: Random Effects model with Book Leverage, MBR and Control Variables

R-sq: within = 0.1002					Number of obs = 71	
between = 0.9118					Number of groups =12	
overall = 0.8742					Obs per group:	
					min = 2.0	
					Avg = 5.9	
					Max = 10	
					Wald chi2(10)= 272.11	
corr(u_i, X) = 0 (assumed)					Prob > chi2 = 0.0000	
Book Leverage	Coef	Std. Err.	z	p>|t|	95% CI	
					lower	Upper
MBR	0.0297702	0.0263393	1.13	0.258	-0.0218539	0.081394
PROFITABILITY	-0.7416271	0.3097387	-2.39	0.017	-1.348704	-0.1345504
RISK	-3.974848	0.749711	-5.3	0.000	-5.444255	-2.505441
INFLATION	0.0061117	0.0065349	0.94	0.350	-0.0066964	0.0189199
YIELDSPREAD	-0.0050011	0.0078402	-0.64	0.524	-0.0203675	0.0103654
COMPANYSIZE	0.1283692	0.0225037	5.7	0.000	0.0842629	0.1724756
PPE	-0.2046356	0.0718088	-2.85	0.004	-0.3453784	-0.0638929
LIQUIDITY	-0.0202204	0.0176442	-1.15	0.252	-0.0548024	0.0143616
MARKET	0.0251039	0.0765165	0.33	0.743	-0.1248658	0.175074
INTERESTRATE	-0.0128704	0.0049103	-2.62	0.009	-0.0224945	-0.0032463
_Cons	-2.008729	0.5562755	-3.61	0.000	-3.099009	-0.9184485
sigma_u	0.02486177					
sigma_e	0.08382996					
rho	.0808452	(fraction of variance due to u_i)				

As depicted in table 4.11, coefficients of determination values (R2s) were within 10.02%, between, 91.18% and overall the model was found to explain 87.42% of the changes in book leverage. Further the findings indicated that profitability, risk, company size, PPE and Interest rate significantly influenced Book leverage as indicated by their significant p-values. The other variables were found to be insignificant as their p-values were greater than 0.05. Profitability, risk, yield spread, PPE, liquidity and interest rates were found to negatively influence book leverage whereas MBR, inflation, company size and market were found to positively impact book leverage.

MBR is positively related with book leverage indicating a positive influence on equity issues which is consistent with Bougatef & Chichti, (2010).These results suggest companies are

inclined to raise external equity when they are overvalued by the market. Corporate executives in these firms recognize that their stocks are highly priced by market and as a result they try to take advantage of these overvaluations. This evidence conforms with findings of Alti, (2006);Baker & Wurgler, (2002);Graham & Harvey, (2001) that companies exploit opening windows for financing and offer securities when they notice their securities to be overvalued by the market. The result contradicts Mahajan & Tartaroglu, (2008) study which established negative relation for G-7 which could not be ascribed to equity market timing.

Profitability is negatively related with book leverage supporting pecking order, Myers & Majluf, (1984) prediction that lucrative companies exhibit lower leverage ratios due to their preference to fund investments internally. Risk and book leverage are negatively related. Risky companies have lower leverage levels. Book leverage and yield spread are negatively related. When yield spread is quite high firms would prefer to issue equity to fund their investments and hence depressed book leverage levels hence the negative relationship between book leverage and yield spread. This relationship supports market timing in which managers would issue the form of financing whose market conditions are favourable. In this case the managers are avoiding the unfavourable market conditions in the debt market.

Tangibility was negatively related with book leverage meaning that high levels of tangible assets increase collateral value and therefore firms can borrow more easily than those with lower leverage. Liquidity was negatively related with book leverage meaning high liquidity levels in a firm would result in lower leverage levels concurring with pecking order theory, Myers, (1984) which hypothesizes companies first utilize internally generated funds, before seeking other sources. Interest rates were established to be negatively related with book leverage implying that when interest rates are high or rising, companies will offer equity lowering book leverage ratio consistent with debt market timing in which corporate executives offer debt when market interest rates are low. These findings concurs with ,Henderson et al., (2006) who established that the amount of debt issued and interest rates levels were negatively related in the studied countries.

Market which is a proxy for market performance has an insignificant positive sign which implies that performance of the stock market will stimulate debt issuance which concurs with the market timing theory since an improved performance in equity market should not drive companies to issue debt. This contradicts Lucas & McDonald, (1990) study who posit that abnormal positive share return and abnormal rise in the market precede equity issuances. Inflation positively influences book leverage. If inflation levels are high investors will have less disposable income therefore, they will not invest in a company's shares. This will drive share prices down. This creates an unfavourable market condition for firms to issue equity hence firms will turn to debt hence increasing the book leverage ratios of the listed firms. A finding conforming to market timing theory, Baker & Wurgler,(2002) who asserted that companies should offer debt or stock when conditions in the market are favourable.

Yield spread influences the decision for firms to offer debt and the direct impact on leverage levels in a firm. Large firms are more inclined, coupled with capability and capacity to utilise debt in capital structure decisions resulting in a positive relation between company size and book leverage.

4.6 Panel Regression with Market Leverage and MBR

In this section, a panel regression model was fitted with market leverage and MBR as response and predictor variables respectively. Pooled OLS, fixed and random effects models were fitted, from which the best model was chosen. Hausman test confirmed random effect model was the most suitable model to use and was therefore adopted.

4.6.1 Random Effects Model with Market Leverage and MBR

Table 4.12 shows results for the Random-effects GLS regression.

Table 4.12: Random Effects model with Market Leverage and MBR

R-sq: within = 0.0111					Number of obs = 71	
between = 0.0156					Number of groups = 12	
overall = 0.0054					Obs per group:	
					min = 2.0	
					Avg = 5.9	
					Max = 10	
					Wald chi2(1)= 15.77	
corr(u_i, Xb) = 0 (assumed)					Prob > chi2 = 0.0001	
Market Leverage	Coef	Std. Err.	z	p>|t|	95% CI	
					lower	Upper
MBR	-0.0853508	0.0214957	-3.97	0.000	-0.1274815	43220
_Cons	0.7092181	0.078039	9.09	0.000	0.556263	0.8621726
sigma_u	0.24531062					
sigma_e	0.08943924					
rho	.88266694 (fraction of variance due to u_i)					

Table 4.12 results show that, coefficient of determination values (R^2s) were within 1.11%, between, 1.56% and the overall were the model was found to explain 0.54% of the variations in market leverage. MBR coefficient was statistically significant with a p-value of 0.000. To conclude MBR had a statistically significant negative association with market leverage. This conforms with, Baker & Wurgler, (2002) findings that a strongly negatively correlation existed between leverage and their market timing measure. It concurs with, Alti, (2006) findings that market timing shapes funding activities of companies leading to short run variations from target leverage levels. The results agrees with the findings of Moyo, (2016) who established a significant negative correlation between leverage and MBR which they argue confirms validity of market timing theory.

4.6.2 Panel Regression with Market Leverage, MBR and Control Variables

Random and fixed effects model were fitted to the regression model ,market leverage being the dependent variable, MBR as independent variable and control variables from which the best model was chosen. Hausman test established fixed effect model was more satisfactory and was therefore taken up.

4.6.3 Fixed Effects model with Market Leverage, MBR and Control Variables

Table 4.13 presents the Fixed effects Model with Market leverage being the predictor variable, MBR being the independent variable and control variables namely: profitability, risk, inflation, yield spread, company size, PPE, liquidity, market, company growth and interest rate.

Table 4.13: Fixed Effects model with Market Leverage, MBR and Control Variables

R-sq: within = 0.1696					Number of obs = 71	
between = 0.3362					Number of groups=12	
overall = 0.1853					Obs per group:	
					min = 2.0	
					Avg = 5.9	
					Max = 10	
					F(10, 52) = 11.85	
corr(u_i, Xb) = -0.1885					Prob > F = 0.0011	
Market Leverage	Coef	Std. Err.	t	p>|t|	95% CI	
					lower	Upper
MBR	-0.1144	0.0227	-5.04	0.000	-0.1615	0.0688
PROFITABILITY	0.5978	0.313	1.91	0.062	-0.0308	1.2266
RISK	0	omitted				
INFLATION	-0.0026	0.0054	-0.49	0.623	-0.0135	0.0082
YIELDSPREAD	-0.00023	0.0068	-0.03	0.972	-0.0138	0.0134
COMPANYSIZE	0.0737	0.0317	2.32	0.024	0.0099	0.1376
PPE	-0.146	0.1824	-0.8	0.427	-0.5126	0.2204
LIQUIDITY	-0.0256	0.0141	-0.81	0.077	-0.0541	28
MARKET	-0.0989	0.0653	-1.52	0.136	-0.2302	0.0322
COMPANYGROWTH	0	omitted				
INTERESTRATE	-0.00002	0.0059	0	0.996	-0.0118	0.0118
_Cons	-0.9613	0.7397	-1.3	0.200	-2.44472	0.5246
sigma_u	0.2665					
sigma_e	0.0741					
rho	.9281	(fraction of variance due to u_i)				
F test that all u_i=0:		F(11, 50) = 18.93		Prob > F = 0.0000		

Table 4.13 results indicate, coefficient of determination values (R^2s) were within 16.96%, between,33.62% and overall were the model was found to explain 18.53% of the variations in market leverage. ANOVA a measure of general significance of a model using F-statistic and p-value, established p-value of the F statistic was 0.0011 implying the model was statistically significant. Model test results further indicated that only MBR and company size statistically significantly influenced Market leverage as indicated by significant p-values of 0.000 and 0.024

respectively. Other variables were found to be insignificant. MBR, inflation, yield spread, PPE, liquidity, market and interest rates were negatively related with market leverage whereas company size and profitability were positively related with market leverage.

MBR was statistically significantly negatively correlated with market leverage, a result that conforms with Moyo, (2016) findings that leverage and MBR were significantly negatively correlated which the study argued confirms validity of market timing theory. It concurs with Baker & Wurgler, (2002) who established a strongly negative correlation between leverage and their historical market valuations measure.

Inflation is insignificantly negatively correlation with market leverage. This is because when inflation increases the purchasing power declines. This means investors only focus on consuming the essentials and are not in a position to invest in equity of the listed companies generating unfavourable market conditions which drive market leverage levels down. This concurs with Baker & Wurgler, (2002) findings that companies borrow or offer stock when market conditions are favourable.

Yield spread is negatively correlated with market leverage. When yield spread is quite high firms would prefer to offer equity to fund their investments until debt market conditions becomes favourable. This drives market leverage levels higher. Once more the practice is market timing is established where managers of listed look at the over or under valuation of their securities when making their financing decisions.

PPE was negatively correlated with market leverage. Companies with high levels of tangible assets prefer funding investments with debt hence raising their leverage levels.

Liquidity was negatively correlated with market leverage. Highly liquid firms opt to fund their investments internally driving market leverage levels lower. This test results supports, Myers & Majluf, (1984) pecking order theory prediction that lucrative companies exhibit lower debt ratios due to their preference to fund investments internally.

Market was statistically insignificantly negatively related with market leverage. If performance of capital market or market existing conditions were favourable firms will respond by issuing more equity than debt which is conforms to market timing. This test results contravenes, Doukas et al., (2011) findings that when capital markets conditions were perceived to be conducive and adverse selection costs of equity ,were important considerations that influenced certain companies to offer more debt in hot than in cold-debt market periods.

Interest rates were statistically insignificantly negatively associated with market leverage. Evidence suggests firms will offer debt when interest rates are high contrary to market timing theory where high interest rates drive firms to issue equity.

Profitability had a statistically insignificant positive association with market leverage. This supports trade-off theory advocated by Modigliani & Miller, (1963) that a company's profitability may be interpreted to mean firm performance and hence, profitable companies are in a position repay their debt.

Company size and market leverage are positively related. Large firms agency costs are lower and have ease of access to capital markets. Large firms are therefore expected to carry higher debt in their capital structure than equity.

4.7 conclusion on second objective of the study

The second objective aimed at establishing the relationship that existed if any between market timing and capital structure through which MBR which is a proxy and measure of market timing was found to influence book and market leverage as follows; A statistically significant negative relationship was observed between MBR and market leverage for corporate debt and right issuing companies. A statistically significant positive relationship was established for rights issuing firms when the model with book leverage was applied with and without control variables. Further, a statistically insignificant negative relationship was observed for corporate debt issuing firms when book leverage was used as the dependent variable and MBR was used as the

independent variable which changes to insignificant positive relationship when the regression model including book leverage, MBR and control variables was run.

4.8 Finance manager's views with regard to market timing by Companies listed at the NSE

Third objective of the study aimed at examining finance manager's views with regard to market timing by the listed companies at the NSE. This objective was achieved through a personally administered questionnaire to the 21 finance managers of listed companies that issued corporate debt and rights issue in the period under review. The questionnaire had closed and open-ended questionnaires. The results of the findings as per the questionnaire are discussed as follows;

4.8.1 Response rate

The study questionnaires were distributed to the 21 listed companies that issued rights issue and corporate debt between 2006 and 2016. 15 completely filled questionnaires were collected back and analyzed. The response rate was 71.43%. Previous researchers have argued that 50% response rate was sufficient for data analysis(Saunders et al., 2009). Hence, the response rate of 71.43% was regarded as sufficient for data analysis.

4.8.2 Demographic characteristics

4.8.2.1 Level of Education

An educational background summary of the respondents is presented in the figure no.3.0.

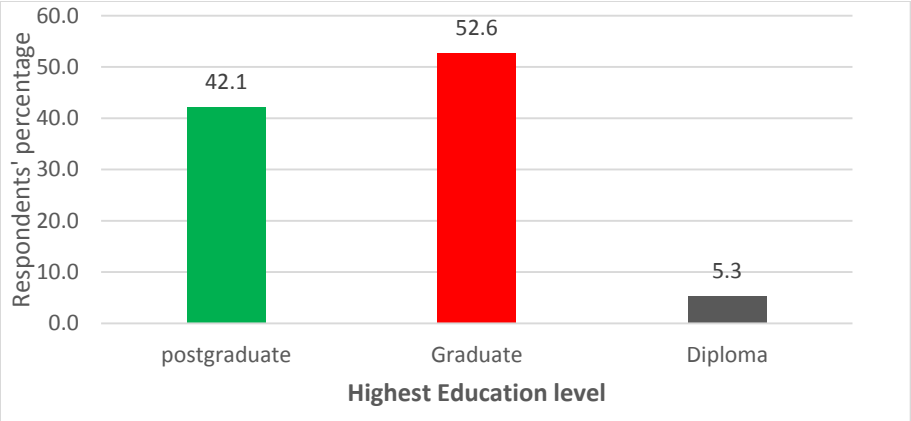


Figure 3.0: Level of Education

Figure 3.0 research findings indicates 52.6% of respondents had attained a graduate education, followed by 42.1% who had attained postgraduate education and finally, 5.3% had attained diploma education. This implies that all the respondents have high education attainment. The level of education was considered since it is an indicator of how informed the finance managers are as far as funding choices taken by companies are concerned and the repercussions such decisions and their timing would have on capital structure and overall cost of capital for the company.

4.8.2.2 Work Duration

The period of time the finance managers had worked in their companies are presented in Figure 4.0.

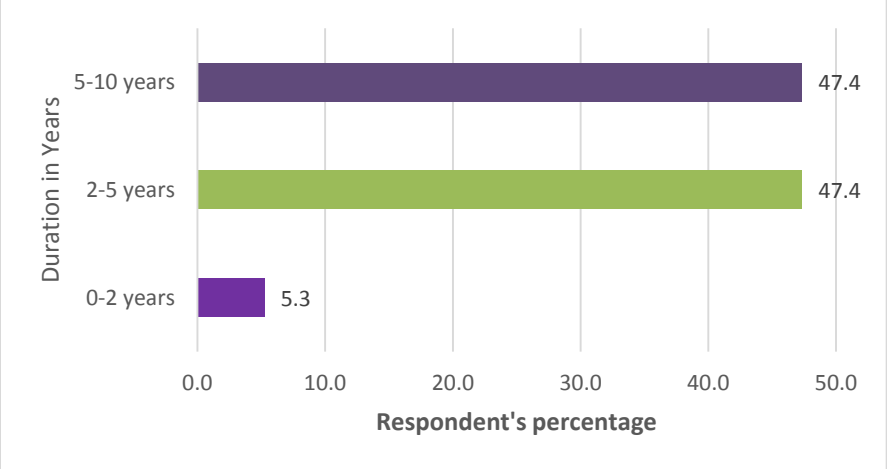


Figure 4.0: Work Duration

Results in Figure 5.0 indicate that 47.4% of the respondents have worked in their respective companies for 5-10 years, 47.4% indicated 2-5years while 5.3% indicated 0-2 years. This indicates a big proportion of finance managers had been employed for more than 2 years in their respective firms. The duration respondents had worked in the company was considered since it would indicate the level of experience such managers had in making financing decisions of the firm and hence how informed they were in making securities issuance decisions for the firm.

4.8.3 Type of Financing

The type of financing utilized by the sample firms outcomes are shown in table 4.14 and Figure 5.0.

Table 4.14: Type of Financing

		Responses		Percent of Cases
		N	Percent	
Type of financing	Retained earnings	10	27.0%	66.7%
	Debt	9	24.3%	60.0%
	Equity	15	40.5%	100.0%
	Hybrid securities	3	8.1%	20.0%
Total		**37**	**100.0%**	**246.7%**

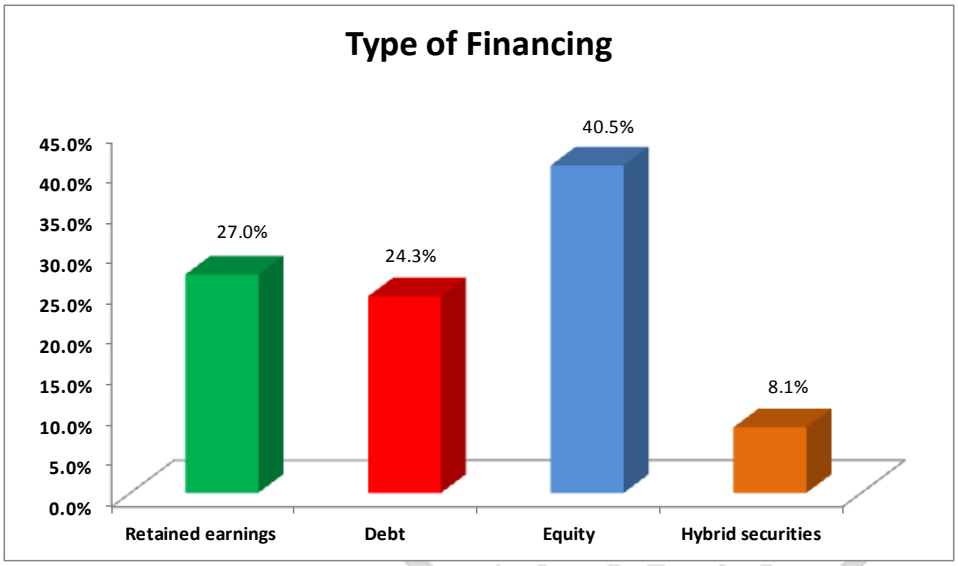


Figure 5.0: Type of financing

Results in Table 4.14 and figure 5.0 indicated that out of the 15(100%) companies, 10 (66.7%) utilize Retained earnings, 9 (60%) utilize debt, 15 (100%) utilize equity while 3 (20%) utilize Hybrid securities. This shows that Equity is the most popular (40.5%) followed by Retained earnings (27%) followed by Debt (24.3%) and finally Hybrid securities (8.1%) was the least utilized.

4.8.4 Target Capital Structure

The respondents were then asked whether their company have an optimal debt-equity mix which the company adhered to. Results in Figure 6.0 indicated that 33% of the respondents agreed that their company have a target capital structure whereas 67% of the listed companies that raised capital through rights issue and corporate debt between 2006 and 2016 do not have an optimal debt-equity mix that they adhere to. This means that such companies have a leeway to offer equity, debt or both as long as overall cost of capital is minimized. Hence such firms are in a position to take advantage of any opening windows for financing when the capital cost for a specific source is favourable to the firm and issue such capital. A finding which confirms such firms can market time either debt, equity or both.

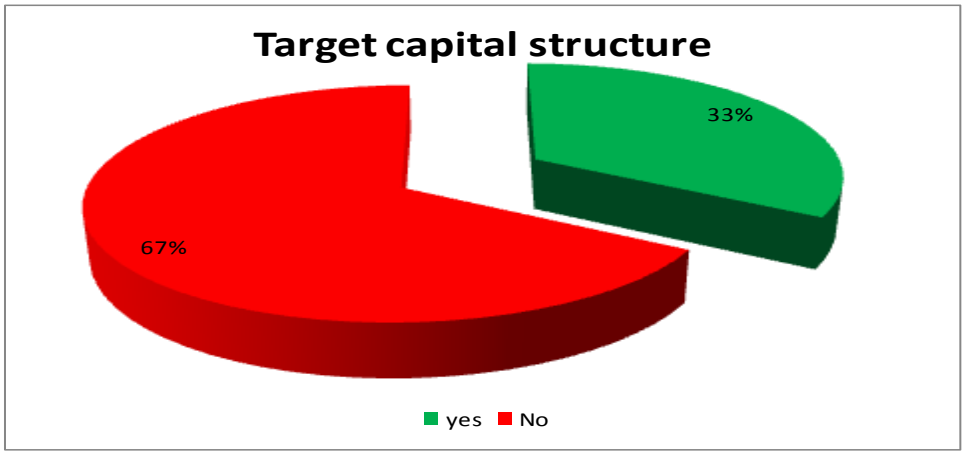


Figure 6.0: target capital structure for corporate debt and rights issuing firms

4.8.5 Equity Market Timing

Several questions were posed to respondents to rate their agreement levels as pertains equity market timing with responses being presented in figure 7.0.

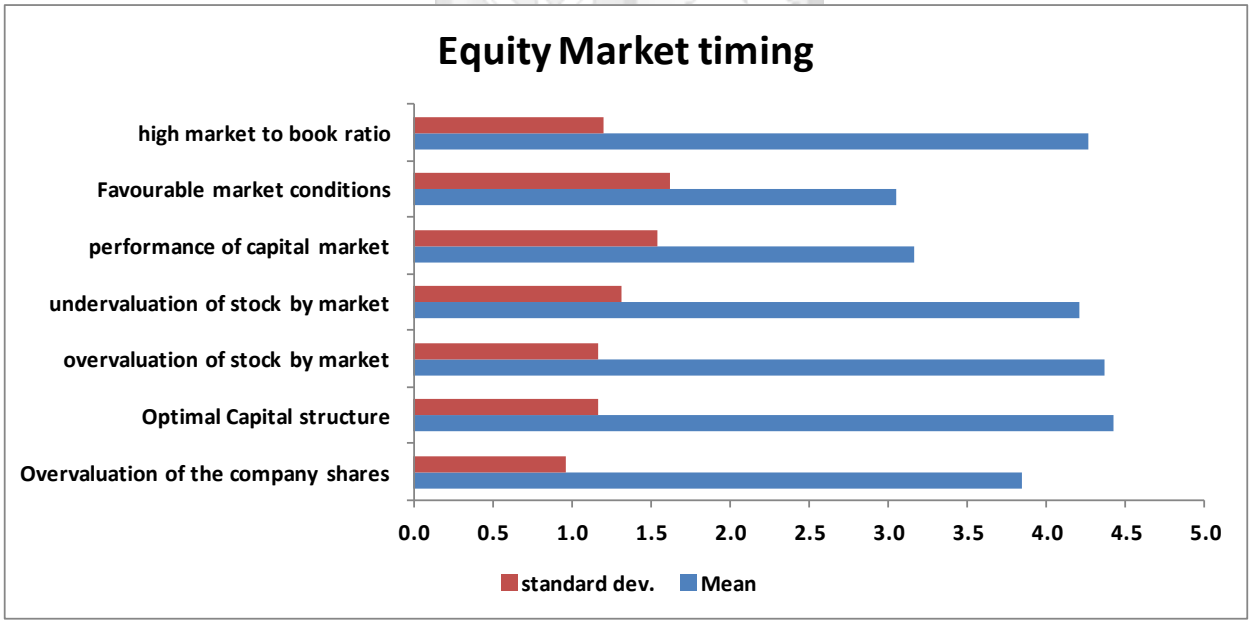


Figure 7.0: Descriptive Results-Equity Market Timing

The test results presented in the figure 8.0 revealed that overvaluation of company stock by the market was the most important factor finance managers put into consideration when issuing equity with a mean of 4.368 and a standard deviation of 1.165.Favourable market conditions influenced decisions to issue equity was considered the least factor managers put into consideration in their decision to issue equity. Overall the respondents highlighted that all the factors were important and significant in making the decision to issue equity as indicated by means of greater than 3 and standard deviation of close or above 1.0. The average mean was 3.9023, which implies that a big proportion of respondents concurred with the statements on equity market timing. However, the responses were varied as shown by a standard deviation of close to 1.0 and above. These responses conform to Graham & Harvey, (2001) findings on an anonymous survey targeting CFOs in firms located in US and Canada on cost of capital, capital budgeting and capital structure. In the survey,67% of CFOs agreed that under or overvaluation of their stock was an essential factor they put into consideration when issuing equity and almost a similar number considered the stock price and if it has been on a rise, the price they sold their shares at was high. In this survey the price at which shares are trading at were considered to be the top on the list factor that influenced the choice to issue equity and the most essential consideration that influenced the resolution to issue debt.

Further agreement with responses are found in a study by Baker & Wurgler, (2000)who argue that stock market inefficiency drives the financial policies made by firms such that when shares are highly priced, the current stockholders of a firm gain by issuing overvalued shares and debt becomes preferred when equity prices are at their lowest. This result contravenes the "irrelevance theory" as advanced by Modigliani & Miller, (1958) which implicitly assume market efficiency.

4.8.6 Debt market timing

Figure 8.0 provides a summary of responses with regard to debt market timing.

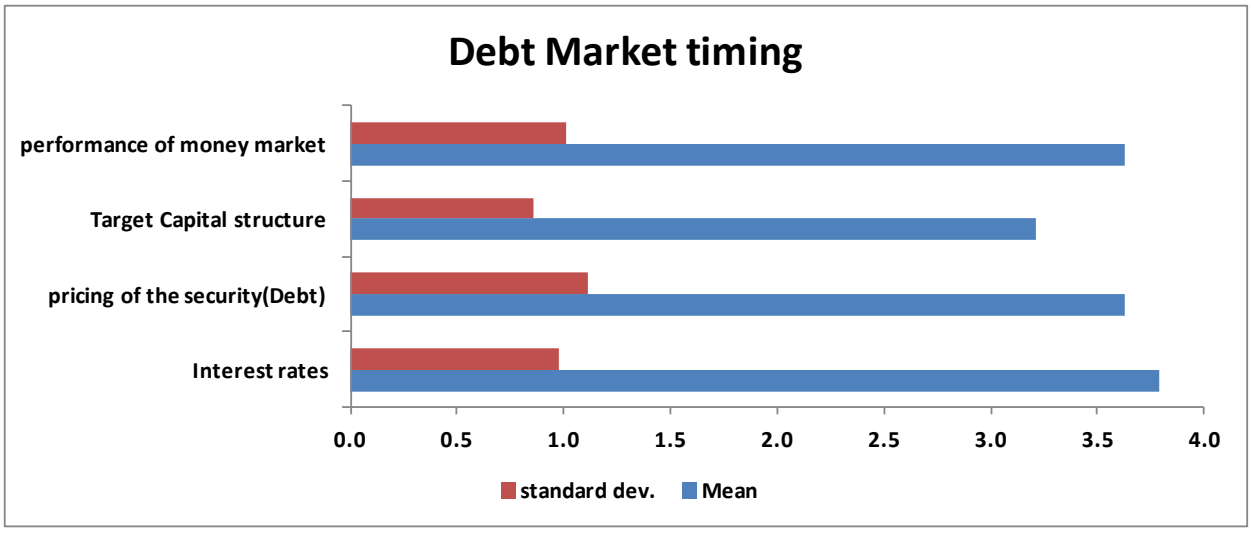


Figure 8.0: Descriptive Results: Debt Market Timing

From the test results presented in the figure 8.0 revealed that finance managers of the listed firms considered interest rates to be the factor that highly influenced their decision to issue corporate debt whereas target capital structure was the least with a mean of 3.211 and standard deviation of 0.855. Overall finance managers highlighted that all the factors were important and significant in influencing the decision to issue debt as indicated by means of greater than 3 and standard deviation of close or above 1.0. The average mean was 3.566, which implies that a big proportion respondents agreed with statements on debt market timing. However, the responses were varied as shown by a standard deviation of 0.989 which is close to 1.0. These responses concur with an anonymous survey by Graham & Harvey, (2001) who sought to establish whether CFOs timed interest rates by offering debt when they felt that market interest rates were particularly low. Moderately strong evidence of such market timing of interest rates was observed.

4.8.7 Triangulation of secondary data and primary data

Primary and secondary data established presence of market timing by firms offering securities as shown in table 4.15.

Table 4.15: Triangulation of primary and secondary data

Triangulation of primary and secondary data					
Primary data	**Mean**	**standard dev.**	**indicator**	**Secondary data**	
Overvaluation of the company shares by market	3.842	0.958	presence of market timing	stock returns	consistency
Optimal Capital structure	4.421	1.169	absence of market timing	No optimal capital structure	inconsistency
overvaluation of stock by market	4.368	1.165	presence of market timing	stock returns	consistency
undervaluation of stock by market	4.211	1.316	presence of market timing	stock returns	consistency
performance of capital market	3.158	1.537	presence of market timing	performance of capital market	consistency
Favourable market conditions	3.053	1.615	presence of market timing	favourable market conditions	consistency
high market to book ratio	4.263	1.195	presence of market timing	MBR	consistency
Interest rates	3.9023	1.279	presence of market timing	interest rates	consistency
pricing of the security(Debt)	3.789	0.976	presence of market timing	pricing of security	consistency
Optimal Capital structure	3.632	1.116	absence of market timing	No optimal capital structure	inconsistency
performance of money market	3.211	0.855	presence of market timing	Market performance	consistency

Triangulation of primary and secondary data results presented in the table 4.15 indicate a consistency level of 81.82% was obtained from both data with 9 out of 11 variables having a consistent effect on market timing. The finance managers indicated that overvaluation of company shares by the market was the most important factor they considered in their decision to issue equity. If shares are highly valued by market, then stock returns of companies will deteriorate after equity issuance as market corrects itself. This concurs with reviewed literature in which performance of firms stocks deteriorate after such issue which is consistent with market timing. This results agree with Ritter, (1991) findings that offering companies underperformed matching firms from the listing date to their 3-year anniversaries. Further conformity is established in Spiess & Affleck-Graves, (1995) findings that SEO post offering performance is quite similar to that of IPOs. They established that the median return in the 5-year period post the offering was 10% for issuers compared to 42.3% of similar size, non-issuing firms in the same industry. Finance managers indicated that high MBR influenced their decision to issue equity. This finding concurs with secondary data where MBR is found to statistically and significantly influence both market and book leverage. Market timing hypothesis that equity issuers ought to have a higher MBR than debt issuers. These findings concur with Baker & Wurgler, (2002) findings that high leverage firms were those that raised capital during periods when their MBR were high and low leverage firms raised capital when their MBR were low. Logical to this

findings is a study by Hovakimian, (2006) whose results suggest that equity issuer are timed to periods of high MBR.

Finance managers further agree to have an optimal capital structure that they adhere to which contradicts the presence of market timing result presented by the secondary data and reviewed literature in which optimal capital structure does not exist Baker & Wurgler,(2002). It conforms to Moyo,(2016) findings that financial services firms quoted at the JSE had optimal capital structures that they adhered to. Finally, finance managers indicated that conditions existing in capital markets and money markets influenced their decision to issue equity. This response concurs to Lucas & McDonald, (1990) finding that equity issuances are preceded on average by an abnormal positive share return and an abnormal rise in the market.

Finance managers further indicated that they issue debt when interest rates were low prior to their increase. Stock returns of corporate debt issuing firms indicate an underperformance of securities issuing firms when compared to similar size non-issuing firms suggesting that corporate executives issue their debt when prevailing interest rates are low and as the market corrects itself this leads to lower stock returns for such firms. A response that concurs with Graham & Harvey, (2001);Bancel & Mittoo,(2004) findings that CFOs and managers claim that they actively attempt to time debt markets by making their debt issuances decisions and pick opportune moments to make such issues when interest rates are quite low. Further confirmation is found in Henderson et al.,(2006) findings that firms time both long term debt and short term debt to coincide with low contemporaneous rates.

Pricing of the debt security is another important factor that finance managers look at when making corporate debt issuances. This means that they pick opportune market times when debt is highly valued, or stock is lowly valued by the market to issue debt. This result concurs once more with the stock return results of the corporate debt issuing firms which recorded underperformed when compared to similar size non-issuing firms. This results concur with Marsh, (1982) findings that companies are heavily influenced by market conditions and past history of security prices in choosing between equity and debt.

Hence, the study concludes that the finance managers have similar views on market timing as presented by the secondary data and this affirms the presence of market timing in issuance of rights issue and corporate debt by listed companies at the NSE.

4.9 Conclusion

The third objective sought to establish the finance manager's views with regard to market timing by the listed companies at the NSE. The finance managers perceived overvaluation or undervaluation of their company shares by the market to be important factors they put into consideration in making their decision to issue equity which conforms to market timing theory. Finance managers agreed that performance of capital market and conditions existing in the market influenced their decision to issue equity which concurs with equity market timing. They also concurred with statements that high market valuations as indicated by high MBR influenced their resolution to issue equity which is in agreement with Bougatef & Chichti, (2010) findings. Bougatef & Chichti, (2010) established that Tunisian and French companies exploited market timing when raising capital. They would offer equity when the market overpriced their stocks and after market performance improvement by exploiting this temporary overvaluation through issuance of equity. These findings conform with Baker & Wurgler,(2002) windows of opportunity theory.

Further, corporate executives agreed to offer corporate debt when prevailing interest rates were low before their increase concurring with debt market timing hypotheses. Finance managers agreed that pricing of corporate debt was a paramount consideration that influenced their decision to issue it to the investing public. They also indicated that the performance of money markets also influenced their decision to issue corporate debt. These responses concur with an anonymous survey by Graham & Harvey, (2001) who sought to find out whether CFOs timed interest rates by offering debt when they felt that market interest rates were particularly low. They established a reasonably strong support of such market timing of interest rates.

4.10. Chapter summary

The study analyzed both primary and secondary data at the same time then their results were triangulated. In an attempt to ensure that the analysis did not produce spurious results, diagnostic tests were carried out on secondary data. The study objectives were tested and discussed. Reliability of primary data was tested using the Cronbach's alpha test.

The study focused on three main objectives. The first objective achieved through an event study methodology which indicated that the securities issuing firms underperformed their size matched non-issuing companies an indicator that corporate debt and rights issuing firms market time when making their financing decisions. The second objective aimed at establishing the relationship that existed if any between market timing and capital structure through which MBR which is a proxy and measure of market timing was found to influence book and market leverage as follows; A statistically significant negative relationship was observed between MBR and market leverage for corporate debt and right issuing companies. A statistically significant positive relationship was established for rights issuing firms when the model with book leverage was applied with and without control variables. Further, a statistically insignificant negative relationship was observed for corporate debt issuing firms when book leverage was used as the dependent variable and MBR was used as the independent variable which changes to insignificant positive relationship when the regression model including book leverage, MBR and control variables was run.

The third objective aimed at examining the finance manager's views with regard to market timing by the listed firms at the NSE. Consistent with the secondary data firm managers are found to use market timing when issuing both corporate debt and rights issue. This results affirm the first perspective from which market timing theory can viewed from, Baker & Wurgler,(2002) which involves identification of the existence of market timing in configuration of capital structures of firms. This perspective aimed at identifying whether windows of opportunities were exploited by companies in issuance of securities. Study results were inconsistent with Modigliani & Miller, (1958) "irrelevance theory" in which market efficiency was assumed. However, if

stock markets are inefficient which is sometimes the case financing policy becomes relevant (Baker & Wurgler, 2000). When equity is highly priced by the market, current owners of company will gain by selling overvalued equity and when equity is lowly priced, debt becomes desirable both of which imply market timing in which managers exploit windows of opportunity for financing to make their security issuance decisions.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Summary of the findings, conclusion drawn and recommendations that emanate from the study are presented in this chapter. Section 5.2 outlines findings discussion as per study objectives; conclusions are drawn in section 5.3, whereas study limitations and recommendations for further studies are presented in section 5.4 and 5.5 respectively.

5.2 Summary of Findings

This study focused on examining presence of market timing in configuration of capital structures by listed companies in the NSE. This part of the report provides detailed discussion of findings with regard to study objectives which were arrived at, through use of primary and secondary data.

5.2.1 Presence of Market Timing

The first study objective sought to investigate presence of market timing in securities issuance by NSE listed companies. This objective was achieved through an analysis of stock price performance by means of an event study methodology that analyzed reaction of stock prices to announcement of the security issuance decisions by the listed firms.

This study focused on the first perspective of market timing theory which entailed confirmation of presence of market timing in securities issuance by companies listed at the NSE. The study established underperformance by share prices of the corporate debt and rights issuing firms listed at the NSE when compared to those of non-issuing firms of similar size. This result concurs with Ritter, (1991) who confirmed an underperformance of CAR for IPO issuing firms from their listing date to three year after the IPO issuance. Spiess & Affleck-Graves, (1995) on the other hand confirmed post offering underperformance of SEO firms where median return in

the 5-year period post SEO was 10.0%, compared with median five-year holding-period return of 42.3% for similar size and industry, non-issuing firms. Identical underperformance was also recorded when offering and control companies were matched on the basis of MBR and size, rather than the size and industry classification.

The findings also concur with Loughran & Ritter, (1995) who established underperformance for both IPO and SEO firms relative to firms not issuing 5 years post offering date. Findings from the study reveal the average annual return for 5 years post offering is 5% for firms carrying out IPOs, and 7% for firms administering SEOs. The study established that the enormity of this poor performance was economically significant since based on returns realized; an investor would have been required to invest 44% more in the issuers than in non-issuers of similar size to have the same level of wealth 5 years post offering date.

Further poor performance of security issuance is confirmed by Spiess & Affleck-Graves, (1999) whose results indicated that 392 straight debt issuers a median sample company performed poorly than a similar size and MBR matched firm by as much as 19% in the 5 years after debt issuance while for 400 convertible debt issuers, the median company performed poorly than its matched counterpart by as much as 20% in the 5 years post convertible debt issuance, while the mean holding-period return for sample companies is 37% less than the mean for matched control companies.

Kruskal Wallis test results presented in appendix V and VI established that all categories of companies recorded statistically significant difference in both pre CAR and post CAR all with P_values of 0.000 except for the category with the pair of companies 53 and 54 for corporate debt issuers which recorded statistically insignificant differences in their pre and post CAR. The study therefore concluded that the variance in the means of the CAR pre and post the corporate debt and rights issuance were likely due to the securities issuance announcements.Hence, the corporate debt and rights issuance announcements had a considerable influence on the share prices.This means that the securities issuance announcements acted as signals which they affected the share prices of the securities firms.This is because a statistically significant

difference in the means before and after rights issue announcement was observed implying the announcement had information content which determined the share prices.

5.2.2 Relationship between Market Timing and Capital Structure

Second study objective aimed at establishing the association between market timing and capital structures for NSE listed companies. Using book leverage as response variable and MBR as independent variable, MBR was found to explain 60.88 % of the variations in book leverage. A statistically significant positive association was established between MBR and book leverage, concurring with Bougatef & Chichti, (2010) findings which indicated MBR to have a positive influence on equity issuance. These results suggest companies are inclined to source external equity when they are highly priced by the market. Corporate executives in these companies recognize their stocks as highly priced and as a result they try to exploit these overvaluations. This evidence concurs with findings of Alti, (2006);Baker & Wurgler,(2002); Graham & Harvey, (2001) whose arguments are that companies will exploit opening windows for financing and issue securities when they are cognisant of their securities being overvalued by the market. The result contradicts Mahajan & Tartaroglu, (2008) during G-7 countries study which established a negative relationship that could not be attributed to equity market timing.

When control variables were added to the regression model, its explanatory power improved with 81.69% of total variations in book leverage being explained by the model. Further findings from the model revealed MBR, profitability, risk, company size and PPE statistically and significantly influence book leverage. Profitability, Risk, PPE, liquidity and market negatively impact on book leverage whereas MBR, inflation, yield spread, company size and interest rates had positively impact on book leverage.

MBR and book leverage were found to exhibit a positive association demonstrating that MBR positively influences equity offerings. A finding consistent with Bougatef & Chichti, (2010) whose findings indicate that MBR positively impacted equity issues. These results suggest companies are inclined to source for external equity when they were highly valued by the

market. Managers in these companies notice that their stocks are highly priced by the market and as a result try to exploit these overvaluations. These finding concur with Alti, (2006);Baker & Wurgler,(2002); Graham & Harvey, (2001) who assert companies will exploit opening windows for financing and offer securities when they recognize their securities to be highly valued by the market. A result which contradicts ,Mahajan & Tartaroglu, (2008) study that observed negative correlation for G-7 countries but showed the negative association could not be ascribed to equity market timing.

Profitability is negatively correlated with book leverage, concurring with pecking order, Myers & Majluf, (1984) prediction that lucrative companies have lower leverage ratios as they choose to fund their investments internally. Risk and book leverage are negatively correlated as anticipated by the study since the riskier a company is the lower would be its leverage levels. Tangibility is negatively correlated with book leverage implying that high levels of tangible assets increases collateral value making it easier for firms to borrow from the market than their counterparts with lower leverage. Liquidity was negatively correlated with book leverage meaning higher liquidity levels in a firm would result in lower the leverage levels which concurs with pecking order theory, Myers, (1984) hypothesizing the use of internally generated funds before seeking other sources of funds.

Market which is a proxy for market performance has a negative sign which indicating stock market performance will stimulate equity issuance driving equity levels up and leverage levels down. The finding concurs with windows of opportunity theory by Lucas & McDonald, (1990) who posit abnormal positive stock returns and an abnormal rise in the market precede equity issuances. Inflation positively influences book leverage. If inflation levels are high investors will have less disposable income therefore will not invest in a company's shares making companies to turn to debt financing, supporting market timing hypothesis that companies will seek the most favourable source of financing. Yield spread influences the decision for firms to offer debt and hence the direct impact on leverage levels in a firm.

Large firms have a propensity, coupled with capability and capacity to utilise debt in their capital structure hence positive association between book leverage and company size. Interest rates and book leverage are positively correlated meaning that if interest rates are rising or expected to rise companies will issue more debt now hence increasing their leverage levels. This evidence shows that firms will raise capital now to avoid future unfavourable market conditions.

When market leverage was applied as response variable and MBR as predictor variable, MBR was able to explain 0.51% of total variations in market leverage. ANOVA indicated the model was statistically significant with a p-value of 0.000. MBR was found statistically significantly negatively influence market leverage, a finding that concurs with Baker & Wurgler, (2002) results that leverage had a strong negative correlation with their measure of historical market valuations. It also conforms with Alti, (2006) findings that market timing shapes funding activities resulting in short run variations from leverage targets. Further the results are in agreement with those of Moyo, (2016) who established a significant negative correlation between leverage and MBR which they argue confirms validity of market timing theory.

After adding control variables to the regression model, explanatory power improved to explain 50.70% of the variations in market leverage. MBR, profitability, company size and PPE were found to statistically and significantly influence variations in market leverage. MBR, profitability, risk and PPE were negatively correlated with market leverage whereas inflation, yield spread, company size, liquidity, market and interest rates had a positive association with market leverage. MBR was found to be statistically significantly negatively correlated with market leverage, consistent with Moyo, (2016) findings that MBR was significantly negatively correlated with leverage. A result found to validate market timing theory. It concurs with Baker & Wurgler, (2002) study which established that their historical market valuations measure was strongly negatively related to leverage. This results agrees with, Setyawan, (2015) findings that MBR had a negative effect on market leverage.

Profitability was observed to be statistically significantly negatively related with market leverage. A finding in support of pecking order theory Myers & Majluf, (1984) prediction that

profitable firms have lower leverage ratios as they choose to fund their investments internally. Risk and market leverage are found to be negatively related. Risky firms have a higher risk premium attached to their stock prices by the market which makes their shares unaffordable to investors. As a result, these firms are unable to raise investments funds through equity issuance as market conditions are unfavourable. This is consistent with market timing theory in which corporate executives believe they can time markets when conditions existing in these market allow (Baker & Wurgler, 2002). Market leverage and PPE are negatively related. Companies with high levels of tangible assets fund their investments with debt hence they are in a position to raise their leverage levels in book but not in market terms.

Inflation and market leverage are positively related. Increases in inflation make purchasing power to decline. Due to inflation, share prices decline making the shares appealing to investors. This creates a favourable market condition for companies to offer equity increasing leverage ratios for these listed firms. A result conforming with market timing theory Baker & Wurgler, (2002) that firms should borrow or issue stock if the market conditions are favourable.

Yield spread is positively related with market leverage. When yield spread is quite high firms would prefer to offer equity than debt to fund their investments until debt market conditions becomes favourable. The practice of market timing is established where managers of listed firms look at the over or under valuation of their securities when making their financing decisions.

Company size and market leverage have a positive correlation. Large companies owing to their lower agency costs, cash flows that are less volatile and ease of access to capital markets embrace more debt.

Liquidity is statistically insignificantly positively related to market leverage. Highly liquid firms would utilise the funds in their custody before they can utilise external funding except in circumstances where managers exploit opening windows for financing and offer equity. This finding confirms managers exploit market timing opportunities in the equity market.

Market and market leverage have a positive relation. If performance of capital market or existing conditions are favourable firms will respond by issuing more equity than debt. Doukas et al., (2011) findings that when capital markets were perceived as conducive and adverse selection costs of equity were important considerations influencing certain firms to issue more debt in hot than in cold-debt market periods.

Interest rates and market leverage were found to be positively related which means that rising or expected to rise interest rates ,will compel companies to issue more debt now in order to circumvent unfavourable debt market conditions, a finding concurring with market timing theory.

Corporate debt issuing firms applying regression model with book leverage as response variable and MBR as independent variable, MBR was able to explain 0.54% of total variations in book leverage. The study concludes that MBR insignificantly negatively influences book leverage. A test result that contradicts, Baker & Wurgler,(2002) findings that their measure of historical market valuation, was strongly negatively related to leverage and Moyo,(2016) who established a significant negative correlation between leverage and MBR interpreted as confirmation of market timing.

Adding control variables to regression model, explanatory power improved as it was able to explain 87.42% of changes in book leverage. Profitability, risk, company size, PPE and interest rates were found to significantly influence book leverage. Profitability, risk, yield spread, PPE, liquidity and interest rates were found to negatively influence book leverage whereas MBR, inflation, company size and market were found to positively impact book leverage.

MBR and book leverage were found to have a positive relationship indicating its positive influence on equity issues. This is consistent with Bougatef & Chichti, (2010) findings that MBR impacts positively on equity issues. These results suggest highly priced firms by market are likely to seek external equity. Corporate executives in these firms recognize their stocks to be highly valued by market and try to exploit these overvaluations. This evidence conforms with Alti, (2006);Baker & Wurgler, (2002);Graham & Harvey, (2001) findings that companies will

exploit opening windows for financing and issue securities when they notice their securities to be overvalued by market. The result contradicts findings of Mahajan & Tartaroglu, (2008) study that established a negative relation for G-7 countries which could not be attributed to equity market timing.

Profitability and book leverage are negatively related which supports pecking order, Myers & Majluf, (1984) prediction that profitable firms have lower leverage ratios as they fund their investments internally. Risk and book leverage are negatively related. Risky companies have lower leverage levels. Book leverage and yield spread are negatively related. When yield spread is quite high firms would prefer to issue equity to fund their investments and hence depressed book leverage levels hence the negative relationship between book leverage and yield spread. This relationship supports market timing in which managers would issue the form of financing whose market conditions are favourable. In this case the managers are avoiding the unfavourable market conditions in the debt market.

Tangibility was negatively related with book leverage meaning that companies with high levels of tangible assets have higher collateral value therefore they can borrow more easily than lower leverage firms. Liquidity was negatively related with book leverage meaning high liquidity levels in a firm would result in lower the leverage levels which concurs with pecking order theory Myers, (1984) who hypothesized that companies utilize internally generated funds first before seeking other sources of funds. Interest rates and book leverage were observed to be negatively related meaning that when interest rates are high or rising, companies will offer equity lowering book leverage ratio in conformity with debt market timing where corporate executives offer debt when interest rates are low. This findings concurs with, Henderson et al., (2006) findings that a negative relationship exists between interest rates levels and amount of debt issued in the countries they studied.

Market which is a proxy for market performance has an insignificant positive sign which implies that performance of the stock market will stimulate debt issuance which concurs with the market timing theory since an improved performance in equity market should not drive companies to

issue debt. This contradicts with Lucas & McDonald, (1990) findings that abnormal positive share return and an abnormal rise in the market precede equity issuances. Inflation positively influences book leverage. If inflation levels are high investors will have less disposable income therefore, they will not invest in a company's shares. This will drive share prices down. This creates an unfavourable market condition for firms to issue equity hence firms will turn to debt hence increasing the book leverage ratios of the listed firms. A finding that conforms with Baker & Wurgler, (2002) findings that companies should borrow or offer stock when market conditions are favourable.

Yield spread influences the decision for firms to offer debt and the direct impact on leverage levels in a firm. Large firms have propensity, coupled with capability and capacity to utilise debt in their capital structure hence a positive association between company size and book leverage.

Finally, when market leverage was considered as response variable and MBR as predictor variable, MBR was able to explain 0.54% of total variations in market leverage. A statistically significant negative relationship was established between MBR and market leverage. A result conforming with Baker & Wurgler, (2002) findings that a strongly negatively correlation between leverage and their market timing measure. It concurs with Alti, (2006) findings that market timing shapes the funding activities of companies leading to short run variations from target leverage levels. The results agrees with the findings of Moyo, (2016) who established a significant negative correlation between leverage and MBR which they argue confirms validity of market timing theory.

Adding control variables to the regression model, only 18.53% of total variation in market leverage could be explained by MBR and control variables. Further MBR and company size were found to significantly influence market leverage. MBR, inflation, yield spread, PPE, liquidity, market and interest rates were observed to be negatively related with market leverage whereas profitability and company size were positively related with market leverage.

MBR was statistically significantly negatively correlated with market leverage, a result that conforms with Moyo, (2016) findings that leverage and MBR were significantly negatively correlated which the study argued confirms validity of market timing theory. It concurs with Baker & Wurgler, (2002) work findings that leverage was strongly negatively related to the historical market valuations measure.

Inflation is insignificantly negatively correlation with market leverage. This is because when inflation increases the purchasing power declines. This means investors only focus on consuming the essentials and are not in a position to invest in equity of the listed companies generating unfavourable market conditions which drive market leverage levels down. This concurs with market timing theory Baker & Wurgler, (2002) that companies should borrow or offer stock if the market conditions are favourable.

Yield spread is negatively correlated with market leverage. When yield spread is quite high firms would prefer to offer equity to fund their investments until debt market conditions becomes favourable. This drives market leverage levels higher. Once more the practice is market timing is established where managers of listed look at the over or under valuation of their securities when making their financing decisions.

PPE was negatively correlated with market leverage. Firms with high levels of tangible assets prefer funding investments with debt raising their leverage levels hence the negative relation between PPE and market leverage.

Liquidity was negatively correlated with market leverage. Highly liquid firms prefer use of internally generated finances to fund their investments driving market leverage levels lower. This test results supports pecking order theory, Myers & Majluf, (1984) that profitable firms have lower debt ratios since they prefer financing their investments internally.

Market and market leverage were statistically insignificantly negatively related. If performance of capital market or existing conditions in the market are favourable, firms will respond by issuing more equity than debt which is conforms to market timing. This test results contravenes

Doukas et al., (2011) findings that when capital markets were perceived as conducive and adverse selection costs of equity were important considerations that influenced certain firms to issue more debt in hot than in cold-debt market periods.

Interest rates were observed to be statistically insignificantly negatively related with market leverage. This evidence suggests that firms will issue debt when interest rates are high in contrast to market timing theory where high interest rates drive firms to issue equity.

Profitability was observed to have a statistically insignificant positive relation with market leverage. This supports trade-off theory as advocated for by Modigliani & Miller, (1963) that a company's profitability may be interpreted to mean firm performance and hence, profitable companies are in a position to repay their debt.

Company size and market leverage are positively related. Large firms lower agency costs, cash flows that are less volatile and ease of access to capital markets are therefore expected to carry more debt in their capital structure than equity.

5.2.3 Finance manager's views with regard to market timing by NSE listed Companies

The third study objective sought to establish the finance manager's views with regard to market timing by the listed companies at the NSE. The finance managers indicated that overvaluation of company shares by the market was the most important factor they considered in their decision to issue equity which is in conformity with market timing. If shares are highly valued by market, then stock returns of companies will deteriorate after equity issuance as market corrects itself. This concurs with reviewed literature in which performance of firms stocks deteriorate after such issue which is consistent with market timing. This results agree with Ritter, (1991) findings that offering companies underperformed matching firms from the listing date to their 3-year anniversaries. Further conformity is established in Spiess & Affleck-Graves, (1995) findings that SEO post offering performance is quite similar to that of IPOs. They established that the median return in the 5-year period post the offering was 10% for issuers compared to 42.3% of similar size, non-issuing firms in the same industry. Finance managers agreed that performance of

capital market and conditions existing in the market influenced their decision of equity issuance which concurs with equity market timing, Baker & Wurgler, (2002). They concurred with the statements that high market valuations as indicated by high MBR influenced their decision in equity issuance. A finding that concurs with Bougatef & Chichti, (2010) findings that French and Tunisian firms exploit market timing in raising capital since they issue equity when they think their shares are highly priced by the market and after a market performance improvement. These results conform to the market timing hypotheses.

Finance managers indicated that high MBR influenced their decision to issue equity. This finding concurs with secondary data where MBR is found to statistically and significantly influence both market and book leverage. It conforms to reviewed literature in which high MBR influence the decision to issue equity and market timing hypothesis that equity issuers ought to have a higher MBR than debt issuers. These findings concur with Baker & Wurgler, (2002) findings that high leverage firms were those that raised capital during periods when their MBR were high and low leverage firms raised capital when their MBR were low. Logical to this findings is a study by Hovakimian, (2006) whose results suggest that equity issuer are timed to periods of high MBR. Taggart, (1977) found support for the notion that changes in pricing of equity and long-term debt are vital considerations that U.S Companies consider in security issuance.

Finance managers further agree to have an optimal capital structure that they adhere to which contradicts the presence of market timing result presented by the secondary data and reviewed literature in which optimal capital structure does not exist (Baker & Wurgler, 2002). It conforms to Moyo, (2016),findings that financial services firms quoted at the JSE had optimal capital structures that they adhered to. Finally, finance managers indicated that conditions existing in capital markets and money markets influenced their decision to issue equity. This response concurs to Lucas & McDonald, (1990) finding that equity issuances are preceded on average by an abnormal positive share return and an abnormal rise in the market.

Finance managers further indicated that they issue debt when interest rates were low prior to their increase. Stock returns of corporate debt issuing firms indicate an underperformance of securities issuing firms when compared to similar size non-issuing firms suggesting that corporate executives issue their debt when prevailing interest rates are low and as the market corrects itself this leads to lower stock returns for such firms. A response that concurs with Graham & Harvey, (2001) and Bancel & Mittoo, (2004) findings that CFOs and managers claim that they actively attempt to time debt markets by making their debt issuances decisions and pick opportune moments to make such issues when interest rates are quite low. Further confirmation is found in Henderson et al.,(2006) findings that firms time both long term debt and short-term debt to coincide with low contemporaneous rates.

Pricing of the debt security is another important factor that finance managers look at when making corporate debt issuances. This means that they pick opportune market times when debt is highly valued, or stock is lowly valued by the market to issue debt. This result concurs once more with the stock return results of the corporate debt issuing firms which recorded underperformed when compared to similar size non-issuing firms. This results concur with Marsh, (1982) findings that companies are heavily influenced by market conditions and past history of security prices in choosing between equity and debt

Finance managers also indicated that they looked at security issuance choices made by other listed or intended to be listed firms at the NSE. This results in a sort of clustering of the issues. They also argued that the success factors of a security issue would influence their decision on the type of financing that they utilize. If a certain company had issued a security and it turns out to be unsuccessful, potential security issuers would turn to alternative means of financing the investments such as internally generated funds and even long term borrowing from commercial banks.

5.3 Conclusions of the study

Based on findings, the study concluded there is presence of market timing in securities issuance by NSE listed companies. This means that when listed companies at the NSE issue rights issue and corporate debts, they take advantage of opening windows for financing and issue the security that they recognized to be highly valued by the market. This means they market time their security issuance decisions. Baker & Wurgler, (2002) argued that market timing can be looked at from two perspectives. The first perspective is confirmation of short run presence of market timing. This study focused on establishing short run presence of market timing .Findings of the event study methodology indicate an underperformance of share prices of corporate debt and rights issuing firms ,which as per literature reviewed including Ritter,(1991);Spiess & Affleck-Graves,(1999);Spiess & Affleck-Graves,(1995) is an indication of firms exploiting short term fluctuations in securities valuation and making security issuance decisions. From stock returns analyses of securities issuing firms conclusions can be drawn that there is presence of market timing by securities issuing firms evidenced by deterioration in stock returns for all securities issuing firms. Hence, the study results affirms the first perspective of market timing theory as put forward by Baker & Wurgler, (2002). The second perspective is confirmation of persistence impact of market timing on capital structure which was not the focus of the current study.

In as far as the relationship between market timing and capital structure are concerned, this study therefore concludes that MBR which is a measure and a proxy for market timing is found to statistically and significantly influence market leverage and book leverage which are measures and proxies for capital structure. MBR was found to influence book and market leverage as follows; MBR had a statistically significant negative association with market leverage for corporate debt and right issuing companies ; a statistically significant positive relationship with book leverage for rights issuing firms and statistically insignificant negative relationship when book leverage was used as response variable and MBR as explanatory variable which changes to insignificant positive relationship when the regression model including book leverage, MBR and control variables is used for corporate debt issuing firms. Other factors which were considered to be important determinants of capital structures were also found to significantly influence market

and book leverage. This control factors included, yield spread, liquidity, interest rates, risk, company size, profitability and PPE.

The study concluded that the finance managers of the companies listed at the NSE have almost similar views with regard to market timing by the listed companies at the NSE. This is because big proportion of them agreed with most statements regarding equity and debt market timing.

5.4 Limitations of the study

Firms with high MBR which are expected to exploit misvaluation by the market and issue equity are often fast growing and as a result they may issue as much debt as equity and this beats their attempts to time the market.

This study focused on all sectors of capital market. The financial sector in capital markets is highly regulated and hence their reporting standards and disclosures differ from those of the other sectors. In this study, 10 out of the 21 companies that made securities issue representing 47.62% of the corporate debt and rights issues made by listed companies were issued by the listed banks and insurance companies that make up the financial sector of the capital market.

The study did not receive 100% response rate from questionnaires administered during the study.

The study covered the period 2006-2016 which indicates periods before and after were not considered thus the effect of the missing period could not be ruled out.

5.5. Recommendations

5.5.1 Recommendations for Practice

Based on this findings, the study recommends that listed companies at the NSE ought to engage more in market timing so as to achieve their goal of maximizing firms' value for their shareholders. Firms' managers should pinpoint windows of opportunities for financing where their securities are overvalued or under-priced due to irrational investors and capitalize on these.

Further, managers should align their interests with those of shareholders and debt holders since interest and principal are periodic payments which if not met a company may face bankruptcy or financial distress.

The study has also shed light on why listed companies issue securities that constitute their capital structures and the reasons why timings of such security issuance decisions are of vital importance to managers of issuing firms in achieving their goal of minimizing overall cost of capital and maximizing firm value for shareholders. It has also gone further and highlighted the expected performance of shares for rights and corporate debt issuing firms before and after making the securities issuance. The study recommends that shareholders and investors should have a long-term investment goal when investing in securities issuing firms listed at the NSE. This is because shares underperform in terms of share price in the short run.

Additionally, based on study findings, NSE listed companies market time their securities issuance decisions, CMA and the CBK should formulate better policies governing the issuance of securities and investor/shareholder protection policies by listed companies.

5.5.2 Recommendations for further study

According to Baker & Wurgler,(2002), equity market timing theory can be understood from two perspectives. Firstly, identification of presence of market timing in development of capital structures by firms, that is, confirming whether firms use or not use, windows for financing chances to offer equity or debt. Secondly, confirmation whether market timing effects are persistent in the long-term or only occur in the short-term, that is, if this practice is adopted endlessly by companies in structuring their capital structures, or whether the practice is temporary in which case companies will raise debt or equity levels again. Baker & Wurgler, (2002), observed that at first glance a short-run effect should be expected. In the sense that, if firms manage to rebalance their leverage levels with a certain rate of recurrence, persistent influence of market timing on debt-equity mix cannot be established, Flannery & Rangan,(2006). On the other hand, if rebalancing cannot be confirmed, use of market timing can

be taken to be a practice in funding choices of firms and hence issuance of shares or debt can be taken to be the outcome of continuous efforts to find the right market time for these new issuances.

The current study focused on establishing existence of market timing in development of capital structures by firms. The study can be extended to confirm whether there is any long run persistent influence of market timing on debt-equity mix of quoted firms at the NSE.

Two financing events undertaken by listed companies were focused on by the study; corporate debt and rights issuance. Further research can be undertaken on each of these events independently to confirm which event listed companies' market time the most on and hence has a higher impact on the resultant capital structures. Further study can be conducted to confirm whether IPO issuing firms market time their security issuance decisions.

Baker & Wurgler,(2002) assert that companies should offer stocks when equity is highly priced and repurchase stocks when they are lowly priced. They contend that managers may choose alternative financing methods including internally generated funds and debt financing where the equity market conditions are unfavourable for the firms. The finance managers of listed firms highlighted that in circumstances where the markets were unfavourable, they would turn to alternative ways of financing such as long-term borrowing from commercial banks or turn to internally sourced funds to finance their investments. Share repurchase is not authorized in Kenya although the amended companies act, 2015 contains a provision allowing companies to repurchase their shares through the capital market. An area worth exploring in future after this provision is allowed is to examine how share repurchase will impact on capital structures of listed companies at the NSE.

Market timing in this study was measured using MBR. Further research should be undertaken to confirm presence of market timing using a different measure of market timing such as the hot and cold markets measure utilised by Alti,(2006) or a valuation model such as the earning based valuation model utilised by Elliott et al.,(2004) in the study of U.S market.

Finance managers responses indicated that, when making financing decisions they consider achieving an optimal capital structure. Evidence from market timing theory and empirical review suggest that an optimal capital structure does not exist. Further research can be undertaken to establish why finance managers think that when making financing decisions a target capital structure is necessary.

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www.cma.or.ke

www.nse.co.ke

www.centralbank.go.ke

APPENDICES

Appendix I: Introduction Letter

Strathmore UNIVERSITY

12th March 2018

TO WHOM IT MAY CONCERN

Academic Reference for Kioko, Elizabeth Nthenya Student No. 94802

Ms Kioko Elizabeth Nthenya is a postgraduate student in our Master of Commerce (MCom) programme. In partial fulfilment of the MCom degree, students are required to carry out a research project and write a thesis on a contemporary subject within their field of specialisation. Among other activities, the project involves data collection and analysis.

Elizabeth is requesting to gather information to be used in her research. The information she will obtain from your organization will be used for this academic purpose only and will be kept confidential. The results of the survey will be in summary form and will not disclose any individual, company name or company information in any way.

The research study is entitled **"Investigation into Presence of Market Timing in Configuration of Capital Structures of Listed Companies at the Nairobi Securities Exchange."**.
We hope that your organization can assist by providing information to the above named student.

Yours faithfully,

Quindos Karanja
Coordinator – Master Programmes
School of Management and Commerce
Email: qkaranja@strathmore.edu

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email info@strathmore.edu www.strathmore.edu

Appendix II: The Research Questionnaire

I am a Masters of Commerce student at the Strathmore business school, Strathmore University. In partial fulfilled of requirements of this degree program, I am carrying out a study titled

"Investigation into presence of market timing in configuration of capital structures of companies listed at the NSE." Findings from this study will provide insights and recommendations for practitioners, academicians, government, and investors. The information supplied will be used only for academic purposes. Your confidentiality and that of your organization are guaranteed as no specific reference would be made as your responses or feedback. A full copy of this report can be availed to you at your request. I look forward to your participation. Thank you.

Section 1: General information

1. Please indicate your highest level of education
   Postgraduate [ ] Graduate [ ] Diploma [ ] Certificate [ ]
2. How long have you worked with this company?
   0-2 years [ ] 2-5 years [ ] 5-10 years [ ] More than 10 years [ ]

Kindly answer the following questions with regard to your company's financing decisions by ticking the most appropriate answer.

Section 2: Capital structure

3. What type of financing does your organization utilize?
   i. Retained earnings. [ ]
   ii. Debt. [ ]
   iii. Equity. [ ]
   iv. Hybrid securities. [ ]
   v. All of the above. [ ]

   If hybrid securities are used kindly comment on the mixture of the securities……

4. Does your company have a target capital structure, such that the company has a given proportion of debt and equity it adheres to? Yes [ ] No [ ]

Section 3: Equity Market Timing

5. The following statements relate to equity market timing in configuration of capital structures of firms. Kindly indicate the extent to which you agree or disagree with the statements on a likert scale of 1-5 by ticking the most appropriate space.

	1	2	3	4	5
Statement	Strongly disagree	Disagree	Somehow agree	Agree	Strongly agree
If the equity price has been on the rise, the price at which shares of a company are offered at is high					
Equity is only issued by the firm with an intention of maintaining a target debt to equity ratio					
The amount by which the stock is overvalued by the market is an important factor put into consideration in issuing equity.					
The amount by which the stock is undervalued by the market is an important factor put into consideration in issuing equity.					
Equity is issued in capital markets where security prices are rising.					
Equity is issued in capital markets where security prices are expected to rise.					
Equity is only issued when market valuation of firm is relatively higher than the book values and past market values.					

Section 4: Debt market timing

6. The following statements relate to debt market timing in configuration of capital structures of firms. Kindly indicate the extent to which you agree or disagree with the statements on a likert scale of 1-5 by ticking the most appropriate space.

	1	2	3	4	5
Statement	Strongly disagree	Disagree	Somehow agree	Agree	Strongly agree
Corporate debt is only issued when interest rates are low just before they increase.					
The selling price of a corporate bond is considered before a decision to issue the bond is made.					
Corporate debt is issued with an intention of maintaining target equity to debt ratio					
Performance of the money markets influences the decision to issue corporate debt					

Any factors considered in making equity and debt issuance decisions taken by your company.....

Thank you for taking your valuable time and effort to respond to my questionnaire.

Appendix III: List of Rights Issue, Corporate Debt issues, matched firms and Listed Companies at the Nairobi Securities Exchange

Rights Issues

Number	company	Shares on issue	Date of issue	Offer price	Sum raised	Subscription level
1	DTB	15,527,343	2006	50	2,305,810,436	297%
2	Olympia	30,000,000	2007	14	428,400,000	102%
3	DTB	23,291,015	2007	70	2,902,060,469	178%
4	NIC Bank	16,482,910	2007	70	1,719,167,513	149%
5	HFCK	115,000,000	2008	20	2,369,000,000	103%
6	KCB	221,777,777	2008	25	8,122,024,075	146%
7	KCB	887,111,110	2010	17	12,500,000,000	82.50%
8	TPS East Africa	24,701,774	2010	48	1,185,685,152	135%
9	Standard Chartered	15,109,323	2010	165.45	2,499.837,490	161%
10	KPLC	488,630,245	2010	19.5	9,830,340,000	103%
11	KQ	1,477,169,549	2012	14	14,487,949,714	70.10%
12	DTB	24,455,566	2012	74	3,369,522,734	186.20%
13	NIC	98,724,391	2012	21	7,007,457,273	338%
14	CFCSTANBIC	121,637,427	2012	33	4,495,719,302	112%
15	SCB	22,080,000	2012	145	8,272,934,400	258%
16	DTB	22,010,009	2014	165	3,631,651,485	440.30%
17	NIC Bank	42,663,040	2014	49.25	1,904,030,511.50	221%
18	Uchumi Supermarket	99,500,000	2014	9	579,116,043	183.60%
19	HFCK	116,666,667	2015	30	9,011,836,920	257%
20	LONGHORN	126,190,476	Apr-16	4.2	533,000,000	101%
21	KenGen	4,396,722,912	May-16	6.55	28,798,535,073.60	92.01%
	Total	**8,567,451,534**			**130,717,803,591.10**	

Source: NSE &CMA

Corporate bonds issue by listed companies

	Issuer	Approved amount	Issued amount	Date of approval	Maturity	Yield
1	Sasini Tea	600,000,000	600,000,000	Nov-07	Mar-12	11.75%
2	Barclays Bank (1st Tranche)	1,000,000,000	1,000,000,000	Nov-07	Nov-14	0.6% above the most recent average 182 day T-bill rate.
	Barclays Bank (2nd Tranche)	2,000,000,000	2,000,000,000	Jul-08	Jul-15	1% above the most recent T-B rate
3	CFC Stanbic	5,000,000,000	2,402,000,000	Jun-09	Jun-16	FXD: 12.5%
	CFC Stanbic	5,000,000,000	98,000,000	Jun-09	Jun-16	FR: +1.75% above prevailing 182-day T-Bill rates
	CFC Stanbic	5,000,000,000	2,500,000,000	Dec-10	Dec-17	FXD 7.5%
4	KENGEN	25,000,000,000	25,000,000,000	Nov-09	Oct-19	FXD 12.5%
5	Safaricom (1st Tranche)	12,000,000,000	7,500,000,000	Nov-09	Nov-14	FR: T.B (182) + 1.85% ,FXD: 12.25%
	Safaricom (2nd Tranche)	12,000,000,000	4,500,000,000	Nov-10	Dec-15	FXD-7.75%/FR 185 basis points above the prevailing 182 day TB rates
6	Housing Finance (1st Tranche)	10,000,000,000	7,000,000,000	Sep-10	Oct-17	FXD: 8.5% - FR: 182 day + 3% with a floor of 5% and a cap of 9.5%
7	Centum	4,000,000,000	3,198,900,000	Sep-12	Sep-17	FXD 13.5% , FR:12.5%
8	I& M	3,655,000,000	3,655,000	Dec-13	Mar-19	FXD:12.5% ,FR: 182 day + 2%
9	BRITAM Medium Term Note	6,000,000,000	6,000,000,000	Jul-14	Jul-19	FXD: 13.0%
10	NIC Medium Term Note	5,514,000,000	5,514,000,000	Sep-14	Sep-19	FXD:12.5%
11	CIC Group Medium Term Note	5,000,000,000	5,000,000,000	Oct-14	Oct-19	FXD: 13.0%
12	EABL	9,047,000,000	9,047,000,000	Mar-15	Dec-18	FXD: 12.25% p.a.

Source: CMA & NSE

Combined list of rights and corporate debt issuing firms

List of companies that issued rights issue and corporate debt between 2006-2016			
No	Rights issuers	Corporate Debt issuers	combined list of the issuing firms
1	Diamond Trust Bank	Sasini Tea	Diamond Trust Bank
2	Olympia Capital	Barclays Bank	Olympia Capital
3	NIC bank	CFC stanbic	NIC bank
4	HFCK	Kengen	HFCK
5	Kenya Commercial Bank	Safaricom	Kenya Commercial Bank
6	TPS East Africa	HFCK	TPS East Africa
7	Standard Chartered Bank	Centum	Standard Chartered Bank
8	KPLC	I&M bank	KPLC
9	KQ	Britam	KQ
10	CFC Stanbic	NIC Bank	CFC Stanbic
11	Uchumi	CIC	Uchumi
12	Longhorn publishers	EABL	Longhorn publishers
13	Kengen		Kengen
14			Sasini
15			Barclyas Bank
16			Safaricom
17			Centum
18			I&M Bank
19			Britam
20			CIC
21			EABL

Matched firms by size and issue type

MATCHED FIRMS BY SIZE AND ISSUE TYPE			
No.	**RIGHTS ISSUE**	**COPRORATE DEBT**	**TOTAL MATCHED FIRMS**
1	Barclays Bank	BAT	Barclays Bank
2	BAT	Boc Kenya	BAT
3	BOC	Britam	Boc Kenya
4	Britam	Carbacid	Britam
5	Carbacid	CFC STANBIC	Carbacid
6	CFc Stanbic	CIC GROUP	CFc Stanbic
7	CIC Group	Equity Bank	CIC Group
8	CoopBank	Kakuzi	CoopBank
9	DTB	KCB	DTB
10	EABL	Kengen	EABL
11	Equity Bank	KENYA RE	Equity Bank
12	Eveready	KQ	Eveready
13	Kakuzi	Mumias Sugar	Kakuzi
14	Kengen	Nation Media	KCB
15	Kenya RE	NIC Bank	Kengen
16	MUMIAS SUGAR	Olympia Capital	Kenya RE
17	Nation Media	sanlam	KQ
18	NIC Bank	Scan Group	MUMIAS SUGAR
19	NSE	Standard Group	Nation Media
20	Safaricom	Uchumi	NIC Bank
21	Sanlam	Unga Group	NSE
22	Sasini Tea	williamson Tea	Olympia Capital
23	Scangroup		Safaricom
24	Total Kenya		Sanlam
25	Transcentury		Sasini Tea
26	UCHUMI		Scan Group
27	Unga Group		Standard Group
28			Total Kenya
29			Transcentury
30			UCHUMI
31			Unga Group
32			williamson Tea

LISTED COMPANIES AT THE NAIROBI SECURITIES EXCHANGE AS AT 31ST DECEMBER 2018

AGRICULTURAL SECTOR
Eaagads Ltd
Kapchorua Tea Company Co. Ltd
Kakuzi Ltd
Limuru Tea Co. Ltd
Sasini Ltd
Williamson Tea Kenya
BANKING SECTOR
Barclays Bank of Kenya Ltd
Stanbic Holdings plc.
Equity Bank Ltd
Housing Finance Co. Kenya
Diamond Trust Bank Kenya
I&M Holdings Ltd
Kenya Commercial Bank Ltd
National Bank of Kenya Ltd
NIC bank Ltd
Standard Chartered Bank
The Co-operative Bank of Kenya
Bank of Kigali
CONSTRUCTION AND ALLIED SECTOR
Athi River Mining
Bamburi Cement Ltd
Crown Berger Ltd
East African Cables Ltd
East African Portland Cement Ltd
INSURANCE SECTOR
Jubilee Holdings Ltd
Sanlam Kenya Plc
Kenya Re-Insurance Corporation Ltd
Liberty Kenya Holdings Ltd
Britam Holdings Ltd
CIC Insurance Group Ltd
MANUFACTURING & ALLIED SECTOR
B.O.C Kenya Ltd
British American Tobacco Kenya
Carbacid Investments Ltd
East African Breweries Ltd
Mumias Sugar Company Ltd
Unga Group Ltd
Eveready East Africa Ltd
Kenya Orchards Ltd
TELECOMMUNICATION AND TECHNOLOGY SECTOR
Safaricom Ltd

REAL ESTATE INVESTMENT TRUSTS(REITS) SECTOR
Stanlib Fahari I-REIT
AUTOMOBILES AND ACCESSORIES SECTOR
Car and General (K) Ltd
Sameer Africa Ltd
COMMERCIAL AND SERVICES SECTOR
Express Kenya Ltd
Kenya Airways Ltd
Nation Media Group
Standard Group Ltd
TPS Eastern Africa (Serena)
Scangroup Ltd
Uchumi Supermarket
Longhorn Publishers
Deacons
ENERGY AND PETROLEUM SECTOR
KenolKobil Ltd
Total Kenya Ltd
Kengen Ltd
Kenya Power & Lighting Co Ltd
Umeme Ltd
INVESTMENT SECTOR
Centum Investment Co Ltd
Olympia Capital
Trans-Century Ltd
INVESTMENT SERVICES SECTOR
Nairobi Securities Exchange Ltd
GROWTH ENTERPRISE MARKET SEGMENT(GEMS)
Atlas African Industries
Flame tree Group Holdings
Home Afrika Ltd
Kurwitu Ventures
Nairobi Business Ventures
EXCHANGE TRADED FUND
New Gold Issuer(RP) Ltd
FIXED INCOME SECURITIES MARKET SEGMENT(PREFERENCE SHARE)
KPLC Ltd 4% Pref 20
KPLC Ltd 7% Pref 20

Source (CMA Statistical bulletin Q4, 2018)

Appendix IV: Kruskal Wallis test results for Pre and post CAR for rights issuing firms

	Pre CAR				Post CAR			
		Mean rank				Mean rank		
Category	Firm	issuing firm	non issuing	Test statistic (df) p-value	Firm	issuing firm	non issuing firms	Test statistic (df) p-value
1	1	24.30		χ2 (2) = 30.168	1	16.80		χ2 (2) = 75.841
1	2		58.57	p = 0.000	2		75.50	p = 0.000
1	3		53.63		3		44.20	
2	4	41.40		χ2 (2) = 53.314	4	30.17		χ2 (2) = 64.511
2	5		33.87	p = 0.000	5		42.83	p = 0.000
2	6		79.47		6		74.07	
2	7		87.27		7		94.93	
3	8	146.87		χ2 (2) = 98.806	8	70.83		χ2 (2) = 206.099
3	9		70.90	p = 0.000	9		60.20	p = 0.000
3	10		25.73		10		91.50	
3	11		154.00		11		208.87	
3	12		132.40		12		159.10	
3	13		166.27		13		133.70	
3	14		130.73		14		28.53	
3	15		137.10		15		211.27	
4	16	89.23		χ2 (2) = 41.516	16	75.37		χ2 (2) = 68.932
4	17		31.93	p = 0.000	17		15.50	p = 0.000
4	18		56.37		18		81.90	
4	19		64.47		19		69.23	
5	20	66.43		χ2 (2) = 52.252	20	70.30		χ2 (2) = 67.784
5	21		18.73	p = 0.000	21		15.50	p = 0.000
5	22		51.33		22		50.70	
6	23	53.60		χ2 (2) = 43.527	23	63.77		χ2 (2) = 60.279
6	24		20.33	p = 0.000	24		15.50	p = 0.000
6	25		62.57		25		57.23	
7	26	113.77		χ2 (2) = 78.631	26	114.93		χ2 (2) = 180.516
7	27		140.62	p = 0.000	27		173.27	p = 0.000
7	28		36.02		28		60.87	
7	29		147.28		29		30.90	
7	30		133.02		30		186.37	
7	31		76.40		31		122.73	
7	32		91.40		32		49.43	
8	33	43.77		χ2 (2) = 34.624	33	45.50		χ2 (2) = 44.262
8	34		17.23	p = 0.000	34		15.50	p = 0.000
9	35	35.68		χ2 (2) = 19.636	35	19.20		χ2 (2) = 46.406
9	36		62.70	p = 0.000	36		55.63	p = 0.000
9	37		38.12		37		61.67	
10	38	24.17		χ2 (2) = 145.698	38	15.50		χ2 (2) = 143.535
10	39		42.77	p = 0.000	39		48.30	p = 0.000
10	40		83.58		40		102.40	
10	41		106.10		41		138.23	
10	42		124.98		42		91.83	
10	43		161.40		43		146.73	
11	44	211.13		χ2 (2) = 90.413	44	210.30		χ2 (2) = 216.093
11	45		93.50	p = 0.000	45		159.93	p = 0.000
11	46		57.40		46		63.67	
11	47		108.37		47		139.03	
11	48		102.77		48		92.93	
11	49		134.43		49		64.20	
11	50		107.87		50		23.23	
11	51		148.53		51		210.70	
12	52	33.47		χ2 (2) = 80.370	52	116.33		χ2 (2) = 71.274
12	53		99.73	p = 0.000	53		68.83	p = 0.000
12	54		118.10		54		77.17	
12	55		80.13		55		90.20	
12	56		46.07		56		24.97	
13	57	97.93		χ2 (2) = 60.609	57	103.23		χ2 (2) = 97.367
13	58		32.93	p = 0.000	58		29.30	p = 0.000
13	59		44.73		59		31.70	
13	60		66.40		60		77.77	

Appendix V: Kruskal Wallis test results for Pre and post CAR for corporate debt issuing firms

Pre CAR				Post CAR			
	Mean rank				Mean rank		
Company	issuing firm	non issuing firms	Test statistic (df) p-value	Company	issuing firm	non issuing firms	Test statistic (df) p-value
1	56.87		χ2 (2) = 40.572	1	48.67		χ2 (2) =64.135
2		54.30	p = 0.000	2		75.33	p = 0.000
3		37.70		3		25.67	
4		93.13		4		92.33	
5	46.83		χ2 (2) = 37.303	5	71.07		χ2 (2) = 69.156
6		24.27	p = 0.000	6		49.93	p = 0.000
7		65.40		7		15.50	
8	44.63		χ2 (2) = 39.295	8	45.50		χ2 (2) = 44.264
9		16.37	p = 0.000	9		15.50	p = 0.000
10	39.35		χ2 (2) = 71.736	10	47.63		χ2 (2) = 81.737
11		59.20	p = 0.000	11		64.53	p = 0.000
12		38.62		12		25.70	
13		104.83		13		104.13	
14	36.40		χ2 (2) = 6.848	14	21.80		χ2 (2) = 14.890
15		24.60	p = 0.009	15		39.20	p = 0.000
16	85.93		χ2 (2) = 71.596	16	99.4		χ2 (2) = 94.018
17		27.57	p = 0.000	17		26.4	p = 0.000
18		88		18		81.6	
19		40.5		19		34.6	
20	61.13		χ2 (2) = 19.055	20	70.97		χ2 (2) = 43.200
21		31.90	p = 0.000	21		35.00	p = 0.000
22		43.47		22		30.53	
23	154.53		χ2 (2) = 121.397	23	165.00		χ2 (2) = 146.942
24		26.40	p = 0.000	24		32.43	p = 0.000
25		60.83		25		51.13	
26		71.47		26		101.13	
27		101.73		27		60.33	
28		128.03		28		132.97	
29	211.33		χ2 (2) = 75.000	29	224.27		χ2 (2) = 195.004
30		119.27	p = 0.000	30		76.97	p = 0.000
31		96.50		31		87.70	
32		80.63		32		91.07	
33		124.63		33		194.90	
34		88.73		34		130.53	
35		138.83		35		141.30	
36		104.07		36		17.27	
37	201.43		χ2 (2) = 175.324	37	198.70		χ2 (2) = 189.468
38		209.30	p = 0.000	38		222.17	p = 0.000
39		30.73		39		124.53	
40		64.20		40		88.40	
41		93.68		41		113.10	
42		118.22		42		134.67	
43		152.93		43		48.83	
44		93.50		44		33.60	
45	213.87		χ2 (2) = 146.752	45	225.50		χ2 (2) = 181.197
46		189.97	p = 0.000	46		185.77	p = 0.000
47		118.77		47		78.90	
48		125.83		48		92.37	
49		81.18		49		150.13	
50		86.58		50		118.17	
51		35.40		51		23.03	
52		112.40		52		90.13	
53	32.98		χ2 (2) = 1.213	53	29.20		χ2 (2) = 0.332
54		28.02	p = 0.271	54		31.80	p = 0.564

Appendix VI: Stationarity Test results for corporate debt and rights issues regression analysis

Stationarity test for rights issue firms

Variable	Statistic	p-value
Book Leverage	26.3352	0.2376
Market Leverage	24.9646	0.2988
MBR	29.6329	0.1277
Profitability	59.1219	0.0000
Risk	0.0000	1.0000
Inflation	205.2497	0.0000
Yield spread	29.9344	0.1201
Company Size	34.6506	0.0421
PPE	24.2953	0.3319
Liquidity	59.1289	0.0000
Market	54.6326	0.0001
Company growth	59.1289	0.0000
Interest rate	69.5015	0.0000

Stationarity test for corporate debt issuing firms

Variable	Statistic	p-value
Book Leverage	17.4924	0.7356
Market Leverage	21.8260	0.4703
MBR	101.9250	0.0000
Profitability	94.3764	0.0000
Risk	0.0000	1.0000
Inflation	135.5975	0.0000
Yield spread	30.8078	0.1001
Company Size	7.4318	0.9984
PPE	36.5209	0.0267
Liquidity	68.9348	0.0000
Market	38.0001	0.0183
Company growth	101.9250	0.0000
Interest rate	68.7104	0.0000

Appendix VII: Comparison between pre CAR and post CAR for rights issuers and the matching firms

Issuing firms						Matching firms							
Company	CAR 30 days before	CAR Announcement day	Pre CAR Difference	CAR 30 Days after	Post CAR Difference	Matching firms	CAR 30 days before	CAR Announcemnt day	Pre CAR difference	CAR 30 Days after	Post CAR difference	Pre CAR Remark	Post CAR Remark
1	0.0015	0.1141	0.1126	-0.0038	-0.1180	1	-0.0204	0.2189	0.2393	0.5621	0.3432	ssuing firm underperform	Issuing firm underperform
						2	-0.0059	0.0478	0.0537	0.1631	0.1153		
2	-0.0108	-0.0084	0.0024	-0.2757	-0.2673	1	-0.0833	-0.2516	-0.1684	-0.1105	0.1411	ssuing firm underperform	Issuing firm underperform
						2	-0.0420	0.0387	0.0807	-0.1008	-0.1395		
						3	-0.0032	-0.0015	0.0017	-0.0340	-0.0325		
3	-0.0256	0.0135	0.0391	0.0401	0.0266	1	-0.0121	-0.0831	-0.0710	-0.0122	0.0709	ssuing firm underperform	Issuing firm underperform
						2	-0.0108	-0.0242	-0.0134	-0.0234	0.0008		
						3	-0.0079	0.0810	0.0889	0.4098	0.3289		
						4	0.0066	0.0309	0.0243	0.0407	0.0098		
						5	0.0059	0.0458	0.0399	0.0300	-0.0158		
						6	-0.0057	-0.0502	-0.0445	-0.0713	-0.0212		
						7	-0.0023	0.0432	0.0455	0.5786	0.5354		
4	0.0186	0.1078	0.0892	-0.0359	-0.1437	1	-0.0035	-0.0879	-0.0844	-0.1417	-0.0538	ssuing firm underperform	Issuing firm underperform
						2	-0.0003	0.0901	0.0904	0.1541	0.0640		
						3	-0.0806	0.0660	0.1466	0.0318	-0.0342		
5	0.0015	0.0147	0.0132	0.0637	0.0490	1	0.0015	-0.0768	-0.0783	-0.1355	-0.0587	ssuing firm overperformed	Issuing firm overperformed
						2	0.0015	-0.0087	-0.0102	-0.0019	0.0068		
6	-0.0070	0.1415	0.1484	0.2124	0.0709	1	-0.0059	-0.0588	-0.0529	-0.0890	-0.0302	ssuing firm overperformed	Issuing firm underperformed
						2	-0.0040	0.0895	0.0935	0.1674	0.0779		
7	0.0026	-0.0058	-0.0084	0.0963	0.1022	1	0.0066	0.1006	0.0941	0.1668	0.0661	ssuing firm underperformed	Issuing firm overperformed
						2	0.0066	-0.0151	-0.0217	0.0075	0.0226		
						3	0.0066	0.0162	0.0096	-0.0808	-0.0969		
						4	0.0066	0.1654	0.1589	0.1017	-0.0637		
						5	0.0104	0.0173	0.0069	0.0870	0.0697		
						6	0.0036	-0.0837	-0.0874	-0.0170	0.0667		
8	-0.0019	0.0173	0.0192	0.0195	0.0022	1	0.0091	-0.0577	-0.0668	-0.1340	-0.0763	ssuing firm overperformed	Issuing firm overperformed
9	-0.0050	0.0135	0.0185	-0.0673	-0.0808	1	0.0682	0.0394	-0.0288	-0.0035	-0.0428	ssuing firm overperformed	Issuing firm underperformed
						2	-0.0050	-0.0164	-0.0114	0.0306	0.0470		
	-0.0166	-0.1496	-0.1329	-0.0836	0.0660	1	-0.0275	-0.0365	-0.0090	0.0206	0.0572	ssuing firm underperformed	Issuing firm underperformed
						2	0.0062	-0.0117	-0.0179	0.1355	0.1472		
						3	-0.0154	0.0647	0.0801	0.0587	-0.0060		
						4	0.0062	0.0170	0.0108	0.0239	0.0069		
						5	0.0092	0.0906	0.0815	0.1157	0.0251		
10	0.0080	0.2593	0.2512	0.4667	0.2075	1	-0.0297	0.0620	0.0918	0.0860	0.0240	ssuing firm overperformed	Issuing firm underperformed
						2	-0.0170	-0.0257	-0.0087	0.0404	0.0661		
						3	0.0110	0.1197	0.1087	0.0400	-0.0797		
						4	0.0000	0.0311	0.0311	0.0014	-0.0297		
						5	0.0158	-0.0572	-0.0729	0.0125	0.0697		
						6	0.0148	-0.0773	-0.0921	-0.0870	-0.0095		
						7	-0.0214	0.1407	0.1621	0.7474	0.6067		
11	-0.0132	-0.1020	-0.0888	0.1984	0.3004	1	0.0343	0.0774	0.0431	-0.1311	-0.2085	ssuing firm underperformed	Issuing firm overperformed
						2	-0.0038	-0.0255	-0.0217	0.0056	0.0311		
						3	0.0098	0.0469	0.0371	0.0909	0.0440		
						4	0.0518	0.0031	-0.0487	-0.1465	-0.1496		
12	-0.0112	0.0884	0.0996	0.0674	-0.0210	1	-0.0036	-0.1297	-0.1261	-0.1224	0.0072	ssuing firm overperformed	Issuing firm underperformed
						2	-0.0063	-0.0678	-0.0615	-0.1413	-0.0735		
						3	0.0061	0.0084	0.0023	0.0603	0.0520		

Appendix VIII: Comparison of pre CAR and post CAR for corporate issuers and the matching firms

Issuing firms						Matching firms							
Company	CAR 30 days before	CAR Announcemnt day	Pre CAR difference	CAR 30 Days after	Post CAR Difference	Company	CAR 30 daysbefore	CAR Announcemnt day	Pre CAR Difference	CAR 30 Days after	Post CAR difference	pre CAR remark	Post CAR Remark
1	-0.0174	0.0404	0.0578	-0.0827	-0.1231	1	0.0701	-0.0020	-0.0721	-0.0263	-0.0243	Issuing firm overperformed	Issuing firm underperformed
						2	0.0393	-0.0336	-0.0730	0.0073	0.0410		
						3	0.0095	0.0495	0.0399	0.0051	-0.0443		
2	0.0059	-0.0151	-0.0209	-0.0348	-0.0197	1	-0.0115	-0.0502	-0.0387	-0.0825	-0.0322	Issuing firm overperformed	Issuing firm underperformed
						2	0.0127	-0.5443	-0.5570	-0.5200	0.0243		
3	-0.0031	0.1464	0.1495	0.1290	-0.0175	1	0.0187	-0.0115	-0.0301	0.0074	0.0189	Issuing firm overperformed	Issuing firm underperformed
4	-0.0019	-0.1442	-0.1423	-0.0992	0.0450	1	-0.0052	-0.0324	-0.0272	-0.1202	-0.0878	Issuing firm underperformed	Issuing firm overperformed
						2	-0.0019	-0.0793	-0.0774	-0.0804	-0.0011		
						3	0.0038	0.0136	0.0098	-0.0287	-0.0423		
5	0.0180	0.0390	0.0210	0.1375	0.0985	1	-0.0057	0.0501	0.0558	0.4323	0.3822	Issuing firm underperformed	Issuing firm overperformed
6	0.0110	0.0898	0.0788	0.0723	-0.0175	1	0.0048	-0.0716	-0.0764	-0.1257	-0.0541	Issuing firm overperformed	Issuing firm underperformed
						2	-0.0068	0.0368	0.0436	0.0670	0.0302		
						3	-0.0079	-0.0269	-0.0190	-0.1065	-0.0796		
7	0.0019	-0.0571	-0.0590	-0.0552	0.0018	1	0.0101	-0.1170	-0.1271	-0.0459	0.0711	Issuing firm underperformed	Issuing firm underperformed
						2	-0.0534	-0.0519	0.0015	-0.0654	-0.0135		
	0.0028	0.1693	0.1665	0.2899	0.1206	1	-0.0109	-0.0713	-0.0604	-0.1653	-0.0940	Issuing firm overperformed	Issuing firm overperformed
						2	0.0145	-0.0599	-0.0745	-0.1257	-0.0657		
						3	-0.0192	0.0001	0.0192	-0.0199	-0.0199		
						4	0.0382	-0.0366	-0.0748	-0.0816	-0.0450		
						5	-0.0028	-0.0264	-0.0236	0.0877	0.1141		
8	-0.0025	0.2411	0.2436	0.2937	0.0526	1	-0.0075	0.0493	0.0568	-0.1874	-0.2367	Issuing firm overperformed	Issuing firm overperformed
						2	-0.0078	-0.0313	-0.0235	-0.0741	-0.0428		
						3	-0.0025	-0.0514	-0.0488	-0.1028	-0.0515		
						4	-0.0111	-0.0204	-0.0093	0.2132	0.2336		
						5	-0.0057	-0.0314	-0.0257	-0.0673	-0.0359		
						6	0.0055	-0.0574	-0.0628	-0.0686	-0.0112		
						7	-0.0025	-0.1338	-0.1312	-0.2875	-0.1537		
9	-0.0043	0.1469	0.1512	0.0680	-0.0790	1	0.0302	0.1846	0.1544	0.2338	0.0492	Issuing firm underperformed	Issuing firm underperformed
						2	-0.0189	-0.2181	-0.1992	-0.0040	0.2141		
						3	0.0064	-0.1080	-0.1144	-0.1215	-0.0134		
						4	-0.0043	-0.0839	-0.0796	-0.0978	-0.0139		
						5	-0.0043	-0.0447	-0.0404	-0.0733	-0.0286		
						6	-0.0085	-0.0949	-0.0864	-0.2565	-0.1616		
						7	0.0374	-0.1048	-0.1422	-0.2863	-0.1815		
10	-0.0075	0.1737	0.1811	0.1149	-0.0587	1	0.0262	-0.0292	-0.0554	0.0479	0.0771	Issuing firm overperformed	Issuing firm underperformed
						2	0.0125	-0.0417	-0.0542	-0.0727	-0.0310		
						3	0.0095	-0.0326	-0.0420	-0.0789	-0.0463		
						4	-0.0016	-0.0635	-0.0619	-0.0156	0.0479		
						5	-0.0016	-0.0566	-0.0550	-0.1010	-0.0443		
						6	-0.0638	-0.1612	-0.0974	-0.1671	-0.0059		
							0.0234	-0.0737	-0.0971	-0.0841	-0.0104		
11	0.0038	0.0102	0.0064	0.0707	0.0605	1	0.0038	-0.0012	-0.0050	0.0896	0.0908	Issuing firm overperformed	Issuing firm underperformed